VALLEY FARMER

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[Written for the Valley Farmer.]

Salt for the Destruction of Insects.

We have been, during the past season, more than usually troubled with insects. Not only has the army worm devastated the meadows, corn-fields, and oat-fields, but insects of many other varieties have been "as thick as toads after a shower," and voracious as cormorants. Both gardens and fields have suffered to an unusual degree. It was almost impossible to get a stand of early cabbages on account of the cut-worm. They were also very destructive upon early corn, peas, cucumbers, and melons—I speak from my own experience. A large sowing of white sugar beets after coming up remarkably well, were nearly all eaten up by some insect.

Now, while such facts are fresh in our minds, I wish to suggest for the destruction of these little destroyers, the application of salt. That common salt, or chloride of sodium, is one of the most valuable manures within our reach, is a well established fact too often unknown or overlooked. It furnishes two of the most important constituents of every vegetable. It was used as manure by the ancients, and long experience has well established its merits.

I have recently read an account of some late experiments in England, in which a large application of salt was made to land in the fall, with most excellent success, both in the destruction of insects and in adding to the productiveness of the soil.

Salt is probably too expensive in the West for very general or extensive field application, but enough is annually wasted, I think, on the majority of Western farms, which, if applied to the gardens, would effectually destroy all slugs, worms, and larvæ which occupy the soil, and at the same time supply one of the most valuable fertilizers which we could obtain. The brine and salt from meat barrels, &c. is usually thrown away, and when it happens to be emptied out upon grass or other vegetation, usually kills it. Hence the opinion is not uncommonly entertained that salt will kill vegetation and is unfit to be applied to land. It is a powerful agent, and of course will kill vegetation if too freely applied. So would guano, ashes, lime, or even stable manure. We are told upon undoubted authority, that from three to sixteen bushels of salt to the acre has been applied, with an increase thereby of from 20 to 50 per cent. in the crops of grains, roots, and grasses. There is no doubt that the latter quantity, or even more, may be safely applied in the fall.—It will then be subject to the action of the elements during the winter; become well incorporated with the soil; almost totally destroy all insects burrowing there; and add largely to the

yield of crops. Let every one, then, save all his brine and waste salt for application to the garden, the cabbage ground, the strawberry patch, &c., and if he buys salt for such purposes, it will be an investment for which he is likely to be well repaid. Merinec.

[Written for the Valley Farmer.]

PHILOSOPHY FOR FARMERS.

BY DR. JOHN T. RODGER, OF ST. LOUIS.

[Continued from August No.]

"Eight-ninths of all the water, one-fifth of the great ocean of gaseous matter, and from one-half to two-thirds of the solid crust of our globe, are composed of oxygen."

"Oxygen constitutes from two-thirds to four-fifths of the structures of plants and animals, and immense quantities are used in the chemical changes of the elements during the construction and disintegration of the tissues and the development of their forces. *The human race* alone annually consumes 800 billion pounds of oxygen in addition to the 1,322 billion pounds contained in the water circulating annually through their textures."

Of the air, twenty-one per cent., by bulk, is oxygen; and vegetables are known under some circumstances to absorb it by their leaves; and thus the supply is constant. But the water in which a large proportion of the essential elements of vegetables is dissolved, is eight-ninths oxygen; and this alone would be an abundant source of this very essential element.

In addition to this source, carbonic acid contains of oxygen seventy-two per cent. by weight.

If the roots of a plant be placed in a vessel partly filled with water while the remainder is occupied by air, the oxygen of the superposed air will be found after a time to have gradually diminished, having been first dissolved by the water and then absorbed by the roots of the plants.

Again, if carbonic acid, or nitrogen, or hydrogen, be introduced into the bottle instead of oxygen or atmospheric air, the plant in a few days will droop and die.

In localities where carbonic acid ascends through the fissured crust of the earth and saturates the soil, there is no vegetation—or at least a very limited quantity, and that of stunted growth.

Now nitrogen is known not to be injurious to vegetable life, yet vegetables having their roots immersed in water covered by nitrogen, die from the exclusion of oxygen; and so also in the cases previously mentioned.

May we not, in passing, draw some important practical deductions:

Wheat, covered by a mantle of snow is, we say, protected from the cold—and so it is; but snow absorbs atmospheric air, and oxygen as an element of it, and it lies loosely on the wheat: so that when it has been robbed of one proportion of oxygen it may absorb another.—But how, if instead of snow, it be sealed by a layer of ice, and all the chinks of the earth have been filled with ice, which had fell in the form of rain and froze on its surface, as sleet? Then the wheat is killed, because it cannot get fresh supplies of oxygen; and it is suffocated just as a man is drowned in water, or as an insect is suffocated by having the little trachea of its body filled up with oil or fine dust.

The same is true of fruit buds late in winter. If covered with sleet, and the sleet is allowed to remain for a considerable time, the fruit is killed and absolutely turns *black* from suffocation. Now, it is obvious to every one that it is not the cold alone, for the wheat, as well as the fruit, will bear greater depressions of temperature when they are not covered with ice, and yet not suffer.

The only remedy for wheat will be, to keep the earth light and allow an opportunity for the storing up, as it were, of a large quantity of air in the soil, so that it may be used as a kind of reserve to support life until the sleet melts off, and the soil is again exposed to the contact of the air.

Nitrogen, forming a very small part of vegetable matter, is nevertheless important as a part; and the source from which it is derived is as universal as that from which the other elements are taken.

As already mentioned, in hay, oats, wheat, potatoes, beans, &c. there are found only about two and a half parts in a hundred, as they are when perfectly dried; whilst if examined as they are taken from the field, this proportion is much diminished by the large proportion of water which they contain.

Hay, when it is stacked, contains one and one-third per cent. of nitrogen; from two to two and a half tons may be token as an average crop of hay to the acre. If the estimate be made it will be found that a ton of hay does not contain far from thirty pounds of nitrogen—and two tons and a half, or the product of an acre of ground, will contain seventy-five pounds of nitrogen; whilst one hundred acres would yield seven thousand, five hundred pounds: and assuming that other products of the farm con-

tain no more nitrogen than does hay, then a farmer of five hundred acres will haul annually into his barn or granaries and cellars about fifteen tons of nitrogen.

Nitrogen forms no part of any of the solid elements of the earth, but the atmosphere contains seventy-nine per cent., by bulk, so that from this source plants must derive it.

Notwithstanding the air surrounds on every side the leaves of plants, and penetrates the earth to come in contact with their roots, yet it is not certain that nitrogen is directly taken in, in this pure state, though absorption to a limited extent may take place both by the leaves and the roots. There is little doubt that nitrogen enters the roots of plants in solution in water.

When water falls through the air, it absorbs all its elements, though not in the same proportions in which they exist in the atmosphere; and of oxygen and nitrogen together only about four per cent. of its bulk; and of this only about two-thirds is nitrogen; so that we would have in rain-water less than three per cent. of nitrogen; and one hundred cubic inches of water would carry with it less than three cubic inches of nitrogen; and of this small quantity a part may be lost, as it percolates through the soil before it reaches the roots of the vegetables growing therein.

Mr. Johnston, in his invaluable work on Agricultural Chemistry, estimates that less than one-seventh of the nitrogen found in the vegetable matter on a given quantity of ground is derived originally in its pure state from the air. But we find this great deficiency made up by the compounds of this gas which do exist in the air—such as ammonia and nitric acid.

Ammonia is a compound of nitrogen and hydrogen, and is found in the roots of the beet, in birch and maple woods, in the leaves of tobacco, and in elder flowers; whilst many fungi and other plants perspire ammonia (as may be easily shown by covering them for a time with a bell glass, and then introducing into it a rod, moistened with muriatic or acetic acid,)—distillation drives it off from many vegetable substances.

Now, it is a well-known fact, that vegetables grow best when freely supplied with decomposing animal manures; and these manures are made up of such animal excretions, as contain large quantities of nitrogen, which, during the decomposition that occurs, give rise to ammonia; and this ammonia being readily soluble in water, it is thus prepared to enter the roots of plants, and contribute to their nutrition: and, farther, as the ammonia is very volatile, it is possible that a portion may be taken up by the leaves as it ascends to mingle with the air.—Compost heaps are really only nitrogen beds.

Our farmers well know the value of this ammonia, and they carefully guard against its volatile disposition by keeping their manure in large piles until it is ready to be hauled to the fields; and then it should be immediately covered by the soil, so that its decomposition may be gradual, and also that when the ammonia is formed it may not escape directly into the air.

But if the ammonia *is* allowed to escape into the air, it is not lost to the world; for that almost universal solvent, *water*, absorbs it as it floats mingling with the clouds; or as the rains fall through the air. Every particle is gathered up, as in a great net, and by it carried back to the earth. So true is this, that if during the summer there has been no rain for some weeks, when at length a gentle shower just moistens the earth, the ammoniacal odor is distinctly perceptible; and the tests of acetic and muriatic acids will also determine its presence.

Here is again an important hint to the farmer to keep his soil light and porous; so that when the rains and dews do carry with them to the earth ammonia, it will pass readily in, and neither run off from the surface, nor be volatilized by the heat of the sun.

Ammonia does not exist ready formed in any of the solid rocks of the earth's crust; but may be detected in the clays and soils whence it has probably been derived from the air by absorption.

When vegetable and animal substances decay, nearly all the nitrogen which they contain is given off in combination with hydrogen, as ammonia; so that here is a means by which this agent is given back to the air, from which plants have attracted it.

When a current of moist air is made to pass over red-hot charcoal, carbonic acid and ammonia are abundantly evolved; now these conditions are present in volcanoes, and thus we may satisfactorily account for the presence of ammonia in the gaseous matters thrown off by volcanoes. Here is an ever-acting source of this very important agent in the growth of vegetable matter.

Again, we see that the atmosphere is the great reservoir into which ammonia, like carbonic acid, is thrown, that it may be the more readily accessible to the world of growing vegetation; and that water is that almost universal solvent by which these agents are gathered, condensed, and carried into the earth, that it may be easily absorbed by the roots of plants.

MULCHING WINTER WHEAT.

Our winter wheat crop is generally seriously injured, and sometimes entirely destroyed, by our winter weather. At the North, where the snow covers the ground four or five months in the winter, the crop is much more certain, for it is protected by the snow; but in our latitude the wheat has no such protection—the ground is bare nearly all winter. Our climate, too, is very changeable, far more so than a more northern or southern one. Alternate thawing and freezing is going on most of the winter. If the sun comes out brightly upon the earth even in rather cold weather, the ground is thawed, and at night again freezes.

The result of this thawing and freezing is that the wheat plants are heaved out of the ground and destroyed. Now if this freezing and thawing could be prevented, the crop might be saved. We are going to recommend a plan which, though it will not be an entire preventive, yet will aid very much in preventing the upheaval of the plants. It is this: When you sow your wheat, which should be done pretty early, also sow on the same ground oats or buckwheat to act as a mulching during the winter. The oats or buckwheat will get up a foot or two, and be cut down by the frost, and afford an excellent protection to the wheat plants all winter.

We ask our readers to try this experiment on a small scale, and report the result through the *Valley Farmer*. We believe they will say that where the oats or buckwheat was sown, the crop was much less affected by the winter.

IMPROVING SOILS.

Ed. Valley Farmer: A short lifetime experience in agricultural pursuits, and close observation, have long since convinced me that a limestone clay foundation was the best and safest soil for all kinds of crops—and for several reasons: First, it is susceptible of the largest amount of improvement; it holds all the manure you put on it, and does not dry out as soon as sandy, gravelly, or slate soils. I have seen soils of this kind improved 100 per cent. in ten years—and from being worn out by continual cropping, become very productive. But this kind of farming requires patience and perseverance; and making and saving manure is one of the agencies required, and which no farmer should lose sight of for one moment.

To effect this, cut your corn off in Sept., before it is dead; after it dry's in the shock, haul it to your barn-yard, feed it to your stock through the winter, which with clover hay and straw, will winter stock well without any grain. Keep your manure in a compact yard.

I have never seen any soil but which would be largely improved by manure—even your hemp lands in Western Missouri will have to be manured after some time; but I am not chemist enough to know what kinds of manure are adapted for different soils, but would refer you to an abridgement of *Dr. Liebig's Agricultural Chemistry*, published in Philadelphia a few years ago, in pamphlet form, by Hogan & Thompson, which contains some valuable hints on the subject, and is within the reach of every farmer. Among other things, he recommends keeping manure under cover, and sprinkling Plaster of Paris over it occasionally.

In my next I may say something about the culture of winter wheat.

Galena, Ill., Aug. '61. Old Penn. Farmer.

SUBSTITUTES FOR COFFEE.

Ed. Valley Farmer: As coffee has recently advanced in price; as it is expected to advance considerably more; and as money is very scarce and hard to get—a great many people within my knowledge are using some substitute, and inquiring which is best. I believe you would do many of your readers a favor by publishing some of the best substitutes which may be convenient to various people.

There are many farmers who are worth—or were worth a year ago, before property became depreciated—$10,000 or $20,000, or more, who find it difficult now to get money enough to meet the necessary cash expenses of the family. It is certainly good policy for all such to reduce their expenses to the lowest possible figure until the return of such times when the produce of our farms will bring a remunerative price.

Let those who do not cultivate the soil, and who can now buy the farmer's produce in many instances at less than the cost of raising it, pay import taxes to support the war as freely as they choose—as for farmers, there will be a necessity in many instances for avoiding as much of it as possible. Indeed, it is highly probable that before we see better times, nearly all our people will need to practice very strict economy—and the sooner we begin, the better.

Coffee is extensively, if not extravagantly used in this portion of the country. It is one of our heaviest items of cash expenses, and one that we cannot produce ourselves. We can, if necessary, grow our own sugar and cotton.

Some people are now using rye, burned and ground, half and half, with coffee. Some use rye alone, and say it is an excellent substitute. Carrots, cut in small pieces, and gradually dried and baked, or burned brown, so as to be readily ground, and used like coffee, is a good substitute, and I think resembles coffee in taste. Barley, burnt and ground like coffee, is another good substitute, if not the best. I have used it for the past two weeks, and feel perfectly satisfied with it. It does not taste much like coffee, but is very agreeable, and certainly wholesome. It requires, also, less sugar by half than coffee, and that is another economical point gained.

Yours truly, E. Conomy.

St. Louis Co. Mo. Aug. 6, 1861.

FISH BREEDING.

Does anybody in the country wish to have, at all times, when fish is in season, a fine mess of them ready to hand and fresh from the water—as fish ought always to be—and thus to give variety to the food for the table—and at the same time by so doing, add to the health of the family? It is a very simple matter. Fish ponds, among other nations, have been prevalent for centuries. The Romans had them in abundance, for they were attached to almost every Roman villa of consequence. The monks of the middle ages took especial care to stock fish ponds in the neighborhood of every monastry. In England, France, and Germany, there are fish ponds connected with many gentlemen's seats, and even with residences of a less pretentious character. With the exception of a few brook trout, large numbers of our people rarely obtain a mess of fish, yet wherever there is a running stream flowing through meadow lands, a fish pond might be made at the expense of a couple of weeks' labor, and of a grating at the entrance to and the outlet of a pond. We have repeatedly seen many bushels of fish, large, plump, and fat, drained from fish ponds that did not cover an area of more than a quarter of an acre. One of these may be briefly described. Close on the skirts of the lawn, attached to the dwelling, a stream flowed. On the lawn itself, which at its lower end was but a few feet above the stream, the fish pond was made. It matters not what its shape was, for the shape of the pond will depend very much upon the formation of the ground, and somewhat upon the fancy of the owner. Here, then, the pond was constructed. When it was ready for the water to be let in, a channel was opened at the upper end of the pond to the river, through which the water was conducted, passing in its course to the pond through a ground set in rough stone work, the bars of the grating in this case of iron being set so closely together as to admit the entrance of the water, but preventing the escape of the fish. At the other end of the pond, a similar channel, guarded by a grate in like manner, permitted the water after passing through the pond, to return to the river, thus keeping up a constant flow of water through the pond. The banks of the pond were sodded to the water's edge, and both channels covered and sodded also, the gratings being set at the upper and lower edges of the pond. In some places we have seen a succession of these ponds, the water flowing from the uppermost one into the next, which is dug at a lower level, and thence into a third. There is one of this kind near Germantown, Pennsylvania, but the one we have described is the simplest, and will answer all useful purposes. Now, when the pond has been formed and the water let in, it is only necessary to stock it with fish, and the thing is done. The pond once stocked, the fish will speedily propagate in abundance, and after the second year they will furnish an ample supply for the table, and leave a surplus for sale. Of course the fish must be such as are common to fresh water streams, and if trout are so kept the stream that supplies the pond must be of cold spring water, and the bed of the pond itself must be gravelled over, or the trout will not thrive.

There is, however, another method of breeding fish, which has lately been patronized by the French government, and the practicability of which has been tested in this country with considerable success. This, however, more particularly applies to the stocking of streams and large sheets of water, and therefore we do not think it worth while at this time to explain it.

But it may be inquired, How is a fish pond, such as you describe, to be stocked in the first instance? There is nothing more easy. Take a net, go to the neighboring river or brook, and drag it for such fish as you may desire to breed—the others you may either return to the water, or send home for the table. As soon as the fish are landed by the net, have ready a water-tight box or barrel, perforated with holes at the top to admit air—put the fish in immediately, and when the pond where they are to remain is reached, empty them carefully into it. Of course when they are there, they must feed occasionally, and the better and more frequently they are fed, the fatter and more domesticated they will become. "The rapidity with which fish grow with good feeding," says a recent writer, "is truly surprising. In the basin of a fountain in my garden, a single trout has lived during the season. For some time no care was taken to feed this fish, it having been left to depend for its existence upon the few insects which chanced to fall into the water, and for several months it increased in size very slightly. After being fed daily with worms for a few weeks, its growth was remarkable. In a single month it had more than doubled its weight."

And now as to fish as a diet. It has been popularly supposed that fish are not very nutritious. Sir Humphrey Davy, however, proved by a series of experiments that the nutritive power of the salmon, the mackerel and eel, was superior to that of beef, for that they contained by comparison more solid matter. Upon the question as to whether fish was more conducive to health than animal food, he expressed the

opinion that it was, for, said he, "It is well known that fishermen and their families, living principally on fish, are commonly healthy — may I not say above the average? and I think it is pretty certain that they are less subject to scrofulous diseases than any other class without exception."

SEED WHEAT.

Now is the time to obtain good seed wheat for the present sowing. Good seed wheat is just as important as good stock. Poor wheat will bring poor returns; just as poor stock will beget poor stock. See that your seed wheat is free from all foul seed. Run it through the fanning mill several times, so as to blow out all light kernels. If you have not a good fan, put your wheat into some large vessel containing water, and then skim off the light seed, chess, &c. In this water some blue vitriol may be dissolved, which will destroy all the sporules of smut. It is also said to be a specific against rust. The wheat may remain half an hour or so in the liquid, and then it may be spread on the barn floor to dry. Air-slacked lime may be mixed with it on the floor, by using a shovel.

If our readers will take some extra pains in obtaining and preparing their seed, they will be rewarded with extra crops.

The Most Profitable Branch of Farming.

At a meeting of the Legislative Agricultural Club, in Boston, recently, the above question was discussed, and the following facts were elicited by discussion, which will be read with interest:

The Chairman said farming might be reckoned as of two kinds: Intensive and extensive, or high and low farming. The expediency of adopting the one or the other depended on the price of land and the distance from market.—Near large cities, or where there is a ready demand for products at the farmer's door, high cultivation and the production of articles that would not bear long carriage, was the most profitable. In the interior, less cultivation to the same extent of land, with grain, stock, and dairy products would form the farmer's objects. He hoped to hear from every quarter of the State accounts of the kind of farming that is found most profitable, and without further preliminaries would invite gentlemen to express their views on the subject before the meeting.

Col. White, of Petersham, said dairy farming was believed most profitable in the section where he resides. The hills of Worcester county are good for this business. Cheese is the leading article. Other productions receive attention, but they are rather auxiliary to the dairy, which is relied on for the chief profits. It requires care and judgment to manage a dairy properly, but with these requisites it is doubtful if any branch of farming pays better. A dairy in Barre of sixteen cows, produced last season an average for each cow of 440 lbs. of new milk cheese, which sold at ten cents per lb.

Mr. Proctor, of South Danvers, thought the highest profits from farming in Essex county, were obtained by liberal manuring and thorough cultivation—the products being vegetables and hay. The onion crop had been an important one until the worm or maggot attacked it.—Within six miles of his residence, 100,000 bushels of onions had been produced in a season. The net profits from this crop had sometimes been $100 an acre for several years in succession. The crop had been continued on the same land for twenty years, yielding from 300 to 500 bushels an acre each season. Carrots are grown extensively both for market and for feeding stock. Indian corn sometimes gives a profit of $20 to $30 per acre. Wheat had latterly done well, yielding thirty bushels per acre. Farmers think it an object to raise enough for their own use.

Mr. Bushnell, of Sheffield, said that in the southern part of Berkshire county, more attention was now being paid to grain than any other article of produce. Wheat does well, as does corn, rye, and oats. Sheep husbandry had formerly prevailed in the county, but had been given up to a great extent. There are now about 40,000 sheep in the county, and in the State but 113,000. Dogs have been the means of breaking up the business. If it were not for the destruction of sheep by dogs, they might be kept to good profit. The present dog law might afford protection if it was put in force, but the selectmen of towns neglect it. The Spanish Merinos were the most profitable sheep for his neighborhood. They gave annually from three and a half to six pounds of washed wool per head, worth on the average fifty cents a pound. Nearer market, mutton sheep might be more profitable. Many lambs are reared for market in his neighborhood. They are generally the produce of a Leicester or South Down ram with Spanish ewes. Sheep greatly improve land: they had been the means of raising the aggregate products of his farm at least fifty per cent. By means of moveable sheds under which they lie, any part of the pasture can be enriched. If the land is plowed and seeded to grass once in three years, it will give one crop of grain in that time, and grow richer. On lands that cannot be cultivated, sheep will keep down the bushes and bring in better herbage. It does not cost half as much to fence against sheep with rails or boards as to fence against cattle.

Mr. White, of Williamstown, thought there was some of the finest farms in his section to be met with in the State. Sheep were formerly extensively kept there for fine wool, but attention is now turned to the South Down and Leicester breeds as most profitable. In North Adams there was one of the best farms in the State. It comprised 200 acres of intervale, on the Hoosic river, and produces immense crops of grass. The cattle of the neighborhood are mostly grade Short Horns. They had a good

market at Troy, N.Y., with which they were connected by railroad. Wheat growing had almost entirely ceased, owing to the midge. Barley was a good crop; oats and Indian corn do well. The soil of the section is mostly a broken micaceous slate, based on clay.

Mr. Lathrop, of South Hadley, said the crops of the Connecticut valley were very abundant last year. Almost all crops adapted to the climate are grown in the valley. Spring wheat, if sown in April, does well. Broom corn has been a profitable crop. Tobacco has sometimes given a net profit of $200 per acre. A ton to an acre is a fair crop. He had never sold it at less than twelve cents a pound, and got from that to twenty-five cents a pound. Still there were but few farmers who make the crop profitable. It required a great amount of manure, thorough cultivation, and special care in curing. He had been asked which could be made cheaper, a pound of mutton or a pound of beef? and had come to the conclusion that, without any regard to wool the mutton could be made cheaper. In fattening sheep one great advantage was, they could take their grain in a crude state and would thoroughly digest it, whereas the grain for cattle had to be ground, and a sixteenth part paid for that operation. He thought the English mutton breeds of sheep most profitable. He alluded to very fine ones he had seen on the farm of Mr. Stone, in Canada. His preference was for the South Downs. They fatten easily and their meat is very fine. It is with sheep as with cattle: the large breeds are most profitable on rich land, and the small breeds are best fitted for poor land.

Mr. Cary, of Foxboro', wanted to know how an annual income of $1750 per acre had been obtained "down on the Cape," a statement of this purport having been made.

Mr. Sears, of Yarmouth, replied that there was land in his neighborhood which had produced a crop of cranberries worth at the rate of $1750 per acre. In 1859, a piece of land was sold for $1500, and last year the owner took from it $1100 worth of cranberries. The land in the section alluded to is generally poor, but there are patches which produce fifty bushels of corn to the acre, which is worth from eighty cents to a dollar a bushel, and pays a fair profit. Rye does well, even on quite thin land. They have great advantages in obtaining marine manures, as kelp, &c.

Mr. Quincy, of Boston, being called on, said his main object was grass, of which he cut about 350 tons annually. He kept about eighty head of cattle, mostly cows, and sold milk. He makes about 100 cords of manure per month—muck being daily mixed with it to absorb the urine. The manure is applied as a top dressing. He considers the saving and application of manure the most important points in farming in this section.

Mr. Brown, of Concord, said the cultivation of vegetables was a prominent branch of farming in Middlesex county. From $8000 to $10,000 worth of early potatoes were carried to Boston from one town. They are sent in August and the early part of September, before the main crop comes in. Asparagus is an important article. Milk is sold largely, from 50 to 100 barrels a day go from Concord. The cows have been greatly improved by crossing with the Ayrshire and other foreign breeds. Roots are raised extensively to feed cows. Milk farms have greatly increased in fertility. Fruit is of much importance, and the county could boast of some of the finest orchards in the State.—The little town of Lincoln had received $8000 in a year for peaches, and in Westford large crops of this fruit have been produced. But the disease called the yellows is killing the trees. The granite soils of the county produce the best of apples. The general condition of the farmers of the county has been much improved in the last fifteen or twenty years. Their dwellings are better, and everything about them denotes more comfort.

Mr. Felton, of South Brookfield, said the soil of his section was not generally very good, and farming there is not of the highest style.—Formerly sheep were kept extensively, but the ravages of dogs caused them to be given up.

EXTRACT.

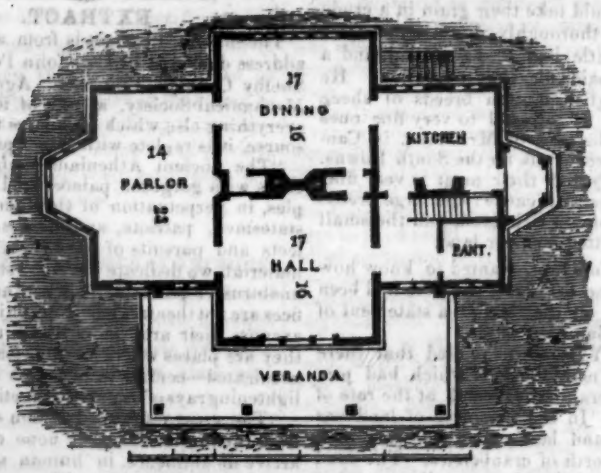
The subjoined extract is from an agricultural address delivered by Col. John Pope, before the Shelby County Tennessee Agricultural and Mechanical Society, at one of its fairs. Like everything else which emanates from the same source, it is replete with sound practical sense:

"The ancient Athenians embellished their cities with gorgeous palaces and sublime temples, in perpetuation of the memories of their statesmen, patriots, and heroes; but the objects and pursuits of our age being essentially material, we dedicate our noblest edifices to the unobtrusive pursuits of agriculture. These edifices are not theatres where ambitious politicians exercise their arts and advance their schemes; they are places where useful information is communicated—centres from which radiate the enlightening rays of useful and practical knowledge.

"The great moral instruction of such exhibitions as these, was, that none could expect to arrive at eminence in human skill except by sound mental culture and by an intelligent pursuit of industry. So valuable is an intelligent pursuit of practical objects that Randolph, in allusion to the effects of well-directed knowledge, said, "I have found the philosopher's stone, the plow, the anvil, and steam." Like the philosopher's stone, these turn all they touch into gold.

"Land, learning, and labor constitute the materials of farming; combine them, and the most entire success is secured. The great obstacle to advancement in agricultural science, has been that the men of science were too often unacquainted with practical agriculture. Ours is emphatically an agricultural country, and science is the guiding light of its progress. Science is continually making valuable suggestions to the agriculturist; the chemist, for instance, has analyzed the soil and made known the constituents of the air. The effective results of labor are attained most completely by the application of scientific knowledge to the mechanical arts.

DESIGN FOR A SMALL VILLA.



The above design, shows in the elevation and plan of a dwelling, an excellent example of economical arrangement; indeed, we scarcely remember an instance where so good an effect, joined to so much comfort and convenience, has been produced at so moderate a cost.

The plan of the principal floor shows, besides the entry, a parlor, a saloon, a dining-room, a kitchen, and a pantry. Not an inch of space is lost; and the management of the stairs and passages in the second story is so complete, that six good bed-rooms are afforded. The exterior, without making pretensions to ornamental effect, is well composed; the proportions are good, the style is well expressed, and the whole is altogether satisfactory to the eye and the judgment. The verandah, which extends along the front of the building, gives an expression of great comfort to every house, in a climate where shelter and repose are so necessary in certain hours of the day, as in the Middle States, and where a verandah is therefore as indispensable as almost any apartment in the dwelling. We think there are few examples existing in this country of a cottage villa combining so much accommodation, and in so unexceptionable a taste, for the sum of $2,300.

SOME PLANTS IMPOVERISH THE SOIL MUCH MORE THAN OTHERS.—Plants are not only nourished by the roots, but also by their leaves; those that have succulent leaves of open texture—such as peas, beans, turnips, and potatoes—derive much of their nourishment from the air, and therefore less impoverish the soil than wheat, barley, oats, rye, &c. whose leaves being of firm texture, depend more upon the root for support. All plants whose seeds yield oil—such as rape, flax, hemp, &c. are the greatest of all impoverishers of the soil. All true succulent plants—such as sempervivum, the house leek, aloe, stapelia, mesenbryanthemum, &c. derive, by far, the greater portion of their food from the atmosphere, and the crustaceous lichens growing in rocks, the bark of trees, &c. derive it entirely from the air.—[*Scottish Farmer.*

SOW MORE RYE.

The importance of sowing rye in the fall in this climate, is not fully appreciated. It makes a fine winter coat for land. It prevents the thawing and freezing, and constant wasting and washing away of the soil in winter. It also forms an excellent winter and spring pasturage for stock, when it can be obtained nowhere else. Then the rye can be turned under with all its roots to enrich and fertilize the soil for the production of future crops. The ground on which rye is sown this fall for the production of pasturage during the winter and spring months, may be plowed in the spring, and planted or sown to other crops, with very great benefit to those crops. Now is the time to sow the crop. Let every one put out a few acres.

HOW TO SOW GRAIN BY HAND.

It requires much skill to sow any kind of grain in a perfectly even breadth; and, "in old times," no man who had not gray hairs, and 60 or 70 years marked on his brow, was thought to have enough experience to scatter, in a field, any kind of grain.

Experience is a capital acquisition in farming, more valuable than in any other occupation.—For mechanics are more attached to the square rule, and a great majority of them insist that if they should strike out a new course in any mechanic art, they might as well have learned no rules—or no trade.

But farming admits of greater latitude. Fields are not so much alike as boards are—and rocks are not to be treated in the same way as knots in timber. The art of farming is not soon learned, and more talent and ingenuity are required to manage a large farm at a profit than to manage a trade.

Still, we are decidedly in favor of putting young farmers forward and teaching them, while young, to use the nicest tools at an early age. Thus young men, at 16, can learn how to use a scythe and put it in order, better than a man of 50. The grinding and the whetting should then be learned by practice. Yet many young men go to old men to do the grinding, &c., as if they could learn how to do the same by looking on and turning the grindstone.

So in regard to sowing grain. Young men ought to have courage enough to begin. Why should they wait till their limbs are stiff, and the palms of their hands have undergone contraction so much as to waste the grain.

Large fields are not so well sown as small ones on account of the want of guides to direct the footsteps. A post or pole set up at the farther side of the field, will not direct the sower as well as a number of poles ranged through the field. For in this last case the poles being in a line, the sower has a complete guide.

One breadth may be four paces wide. Where there is no wind, five paces or one rod may constitute a breadth for sowing. Some men choose to have no guide poles, but rely on going by their former track. When the surface is even and mellow this mode answers well, though not so wide a breadth can be taken as in using guide poles.

And now, how much grain should be sown at each step, or rather at each double step, for the sower throws his handful of grain at the very time when his left foot strikes the ground. At a common pace of three feet one handful of grain is to be sown: not quite as much as the hand will hold—but a moderate handful.

By a trial of one peck you must determine whether you sow too thick or too thin.

One bushel and a half of wheat or rye, will do for an acre. Oats may require from 2½ to 3 bushels, and barley 2 bushels.—[*Ploughman.*

ICE HOUSES.

We have recently made some experiments in ventilating ice houses, showing the great advantage of admitting warm air to the saw-dust which covers the ice at the top. A house with double walls, filled with saw-dust, received last winter its usual supply of ice; and the upper door, through which the ice was passed, carefully closed. It was found this summer to be rapidly melting. The door was opened and the melting ceased. This has been since repeated, and invariably with the same results.

When the door is closed, and the air above the ice thus enclosed, becomes cold, the ice sinks away; when it is opened, and air admitted freely from the outside, the melting ceases. This will perhaps be accounted for in different ways by different persons, but the true explanation is probably this: When the door is closed, the air above the ice is reduced in temperature, and as a necessary consequence becomes heavier and sinks or forces its way downwards through the saw-dust. Its temperature being above freezing (although much below that of the common air), it carries a constant stream of warmth to the ice and melts it.—When the door is thrown open, and the air outside freely admitted to blow over it, this air cannot become cooled and does not sink, and the ice is unharmed.

We have many inquiries from our correspondents, why their ice melts away so rapidly. As a general answer, we might say, you take too much pains in building tight ice houses. We never saw ice keep better than in a board shanty. The air must blow freely over the top of the saw-dust—and this shanty was open all around. A rough floor admitted free drainage; about eight inches of saw-dust was spread evenly over this floor; the ice then built up in square blocks, leaving about eight inches around next to the siding of the shanty, which was filled and packed in as the structure of ice went up; and, lastly, the top was covered with about eight inches of saw-dust. This was the whole process. The ice kept perfectly; was used all last summer; and about two tons, which was left over, was thrown out last winter when the building was refilled. A thickness of eight inches of packed saw-dust may be re-

garded as a perfect non-conductor of heat, for all practical purposes — perhaps six inches would do, if fine and evenly packed. If not packed, it may have cavities or orifices, and admit enough warm air to melt the whole.—[*Country Gentleman.*

Mulching—Surface Manuring.

From the best experience and observation which have come to my knowledge, it is clearly evident that no one operation in farming is more advantageous than *surface-manuring*, or top dressing—for almost all crops—while it is the cheapest mode of manuring.

First—for Meadows.—I had a small Timothy meadow of about five acres, which had been mowed many years, until it would not produce one ton the acre, and so spindling it could hardly stand up before the scythe; but during early winter about half of it was spread over evenly with a liberal coating of barn-yard manure; this protected the roots of the grass during the freezing and heaving, and bleak winds of winter, so that wherever there was any cracking open or heaving of the ground by frost, the finest of the manure fell into them, not only protecting but enriching the grass; this is one benefit. Then, the spring thaws and rains drenched the manure and carried it into the soil, before the sun was hot enough to evaporate it much, which gave the grass a vigorous, healthy start; this is the second benefit. Again, this *mulching* shelters and protects the young grass and roots, still later in the season, from the hot sun, before the grass is grown enough to shade itself, and this is a third benefit to the meadows—while there are still others, such as keeping the land mellow, moist and loose during the season.

Second—for Corn and Potatoes.—Let the ground be covered with a good liberal coating of half or full rotted manure, either before planting or after the crop is fairly up, and the ground will be kept mellow and moist—never suffering from drouth—and the weeds will be kept down, so that hoeing and cultivating can be dispensed with—while the time required to do this mulching well and carefully, will be less than that to hoe and dress it well; then the manure will be finely and gradually drenched to the roots by the occasional rains, in about such quantities as will handsomely stimulate and nourish the plant, continually, to a vigorous growth; while this manure will not begin to evaporate enough to be wasted, before the crop will have grown sufficiently that the leaves will absorb and profit largely by this escape of ammonia from the manure; for the successful fruiting of crops need to appropriate liberal supplies of ammonia and other gases, more by their leaves above ground than by the roots below—it being more their office to seek and take up the requisite minerals. At least such has been my experience, having invariably obtained the best yields of corn, potatoes and grass from lands thus mulched or manured, and that, too, where the corn and potatoes were not hoed or cultivated at all after planting; while I have never known a corn or potato, or grass field thus treated, to suffer in the least from drouth, even in the driest seasons, as it not only prevents the escape of the moisture already in the earth, but also absorbs and retains the dews and mists of night. These are no vague notions, but well settled facts. Not only will time be saved and the labor be made easier by faithfully and extensively practicing this top-dressing, but larger and more certain yields of crops will result from it, *and the soils remain longer in tilth.*

Third—for Wheat.—These beneficial results will be equally certain and liberal in the raising of wheat, particularly if winter wheat be sown—and winter-killing will be almost totally prevented thereby. Let the manure be spread as soon as the ground is frozen; then if the ground is likely to crack by freezing, the manure fills in and protects the roots; nor can the winds dry and drift the soil—laying bare the roots—as in the case of our prairies more particularly.

Madison, Wis. D. S. C.

—[*Co. Gent.*

FIXED FACTS IN AGRICULTURE.

1. All lands on which clover or the grasses are grown, must either have lime in them naturally, or that mineral must be artificially supplied. It matters but little, whether it be supplied in the form of stone lime, oyster lime, or marl.

2. All permanent improvement of lands must look to lime as its basis.

3. Lands which have been long in culture, will be benefited by applications of phosphate of lime, and it is unimportant whether the deficiency be supplied in the form of bone dust, guano, native phosphate of lime, composts of fish, ashes, or that of oyster-shell lime, or marl—if the land needs liming also.

4. No lands can be preserved in a high state of fertility, unless clover and the grasses are cultivated in the course of rotation.

5. Mold is indispensable in every soil, and a healthy supply can alone be preserved through the cultivation of clover and the grasses, the turning in of green crops, or by the application of composts rich in the elements of mold.

6. All highly concentrated animal manures are increased in value, and their benefits prolonged by admixture with plaster, salt, or pulverized charcoal.

7. Deep plowing greatly improves the productive powers of every variety of soil, that is not wet.

8. Sub-soiling sound land, that is, land that is not wet, is eminently conducive to increased production.

9. All wet land should be drained.

10. All grain crops should be harvested befor the grain is thoroughly ripe.

11. Clover as well as the grasses intended for hay, should be mowed when in bloom.

12. Sandy lands can be most effectually improved by clay. When such lands require liming or marling, the lime or marl is most beneficially applied when made into compost with clay. In slaking lime, salt brine is better than water.

13. The chopping or grinding of grain to be fed to stock, operates as a saving of at least twenty-five per cent.

14. Draining of wet lands and marshes adds to their value by making them produce earlier, and by improving the health of neighborhoods.

15. To manure or lime wet lands, is to throw manure, lime and labor away.

16. Shallow plowing operates to impoverish the soil, while it decreases production.

17. By stabling and shedding stock through the winter, a saving of one-fourth the food may be effected; that is, one-fourth less food will answer than when such stock may be exposed to the inclemencies of the weather.

18. A bushel of plaster per acre, sown broadcast over clover, will add one hundred per cent. to its produce.

19. Periodical applications of ashes tend to keep up the integrity of soils, by supplying most if not all of the organic substances.

20. Thorough preparation of land is absolutely necessary to the successful and luxuriant growth of crops.

21. Abundant crops cannot be grown for a succession of years, unless care be taken to provide an equivalent for the substances carried off the land in the products grown thereon.

22. To preserve meadows in their productiveness, it is necessary to harrow them every second autumn, apply top dressing, and roll them up.

23. All stiff clays are benefited by fall and winter plowings; but should never be plowed while they are wet. If at such plowings the furrow be materially deepened, lime, marl or ashes should be applied.

24. Young stock should be moderately fed with grain in winter, and receive generous supplies of long provender, it being essential to keep them in fair condition, in order that the formation of muscle, bones, &c., may be encouraged and continuously carried on.

25. Milch cows in winter should be kept in dry, moderately warm, but well ventilated quarters; fed and watered three times a day; salted twice or thrice a week; have clean beds; be curried daily; and in addition to their long provender, should receive succulent food morning and evening.

26. Full complements of tools and implements of husbandry are intimately connected with the success of the husbandman.

27. Capital is not only necessary to agricultural success, but can be as properly used in farming as in any other occupation.

28. Punctuality in engagements is as necessary to an agriculturist as it is to a merchant.

29. Every husbandman should carefully read and digest matters connected with his business; his success being as dependent upon a full knowledge of its principles and details, as is that of a lawyer or physician with a knowledge of the science of law or physic.

30. Wheat, rye, oats and barley should never follow each other in a course of rotation; there should always be an intervening hoe crop between them.

31. Weeds should never be permitted to mature their seed on a farm, but be pulled up or cut down as often as they show themselves, such being the only effectual method of eradicating them. To insure this result, the ground should be planted in corn, and that kept clean.

32. Time and labor devoted to the collection of materials to be converted into manure, are the most fruitful sources of profit in the whole range of farm economy.

33. The orchard, to be productive of good, fair fruit, requires to be fed as much as does a field of grain. The soil of each requires that the substance abstracted by the crops shall be restored. The soil should be kept clean and open to the ameliorating influences of the sun, the dews, the rain, and the air; the bark of the tree should be kept in a healthy condition, by scraping when necessary, and by alkaline washes.—[*Ohio Farmer.*

EFFECT OF SHADE ON SOILS.

Dr. Baldwin, of Virginia, remarks the *Boston Cultivator*, has long contended that the soil by shading undergoes putrefaction, and from this cause becomes fertile. Admitting the result as thus claimed, it does not follow that the argument or theory in regard to it is correct. We have given our own views on the subject heretofore, and have been pleased to find them supported by those of R. C. Kendall, in a late communication to the *American Farmer*. Mr. K. believes that darkness favors the deposit of nitrate of potash in the soil, which is one of the causes of the fertility produced by shade; but he holds that a more important influence is exerted by the earth-worm, of whose habits we lately spoke at considerable length. Mr. K. says:

"But this chemical combination and deposit is the avant courier of a more powerful fertilizing agent that works exclusively under the cover of total darkness. This is the common earth-worm. These industrious manipulators of the soil shun sunshine and the broad glare of day; but give them a dark corner, a shaded nook, the cover of a flat stone, a plank, or heap of rubbish, and their labor is incessant, indefatigable, and most efficient as a fertilizing agent.—Cover over a bit of sterile earth with a plank, so as to exclude the light and insure moisture, and within a month there is a manifestation of the presence of nitre where the closest chemical test could have detected none before. Within another month comes the army of subterranean sappers and miners, boring the whole surface soil to the depth of a foot, into millions of holes, passing every particle of it through their long, flexible organism, and leaving in their excretion a compost beyond the power of human skill to equal. Under the administration of these wonderful workers in the darkness, in the space of two years, the hard-packed, sterile ground has been as thoroughly cut up as ever was an unpainted, wooden-bottomed ship by the terredo after three months of inactivity in the waters of Tampa Bay. By the agency and industry of these wriggling atomatic Jethro Tulls, the whole organic structure of the darkened surface has been changed both in quality and complexion. From a pale, barren, and baked hard-pan, it has become a light, porous, dark-colored soil, rich in all the elements of vegetable life."

BUTTER.

There is some good butter made; but only enough to show that it can be made well. Yet it can *all* be made well; it is capable of that if people only thought so, and set themselves about it. They are careless and negligent; but also ignorant. This ignorance must be removed, or people will continue to flood the market with what is termed butter, but which really is grease.

There is much in taking care of your milk and cream, and something in churning; but most of all in *working* your butter. That is the nice point, especially in summer. The whole turns on the *milk in your butter*. That must be worked out, or in a few days of hot weather it will make itself manifest. The action of heat on the milk is the same while the milk is in the butter, as out; and you know what that is in summer when kept a few days, to say nothing of weeks, and even months. Think of butter exposed to such milk: and such is most of the butter now used. When eaten fresh, the evil is obviated partially, not wholly; for no butter is sweet while butter-milk remains in it.

The remedy is obvious—work out the butter-milk. But this is a nice operation: not an extra laborious one. It is nice, because if worked too much, the globules of which butter is composed (small bags containing oil) are broken; and thus you have grease. Churn your milk and work your butter mildly. Work it till not a trace of milk is present. It takes a little longer, but the labor is less hard. When your butter is rosy and crisp (instead of chalky and heavy), with the beads of moisture clear as dew-drops—your butter is made. Pack it, or leave it in rolls; put it in your cellar, or leave it exposed to the upper temperature—it is all the same; and all the same for that whether you have salted it much or little, or not at all—it will stay sweet. Why? Because it is butter, and nothing else. It will always be "fresh." Salt is used only to flavor, not to preserve. Butter, in a pure state, will preserve itself.

To particularize a little: Your milk should be put in clean pans, not very deep; and stand to cream from 24 to 28 hours, in a temperature of about 60°, not higher: lower, if anything.—From 55° to 60° ought to cover the extent of variation. The cream should be taken off when the milk is at the point of turning sour. After that, no cream gathers; and acid never benefits butter. Churn, as I before said, slowly, and remove the butter at once from the churn; and work it and salt it as has been directed. The process is simple and easy. The great wonder is, that people endure such wretched stuff, when with the same labor they may have a good article. It is not only the superior relish that recommends good butter—it is healthier: this is a great point. Physicians particularly exclude bad butter from the diet of the patient.

Remember the requisites: Cleanliness, a proper temperature (55° to 60°), and slow, but thorough, working of the butter. You then have rosy butter, and may exhibit it with pride.

CROSS-BREED OF ANIMALS.

The following remarks on the above much mooted point, upon which a great deal of ink has been wasted, are from the pen of an English writer, well posted up, and candid and fearless in the expression of his opinions. After a survey of the whole question, he remarks:

We cannot do better in concluding our paper, than gather and arrange in a collected form, the various points of our subject which appear to be of sufficient importance to be again presented to the attention of our readers. We think, therefore, we are justified in coming to the following conclusions:

1. That there is a direct pecuniary advantage in judicious cross-breeding; that increased size, disposition to fatten, and early maturity, are thereby induced.

2. That while this may be caused for the most part of the very fact of cross-breeding, yet it is principally due to the superior influence of the male over the size and external appearance of the offspring; so that it is desirable for the purpose of the butcher that the male should be of a larger frame than the female, and should excel in those peculiarities we are desirous of reproducing. Let it be here, however, repeated as an exceptional truth, that though as a rule the male parent influences mostly the size and external form, and the female parent the constitution, general health, and vital powers, yet the opposite result sometimes takes place.

3. Certain peculiarities may be imparted to a breed by a single cross. Thus the ponies of the New Forest exhibit characteristics of blood, although it is many years since that a thoroughbred horse was turned into the forest for the purpose. So likewise we observe in the Hampshire sheep the Roman nose and large heads, which formed so strong a feature in their mater-

nal ancestors, although successive crosses of the Southdown were employed to change the character of the breed.

It has been asserted by some observers, that when a female breeds successively from several different males, the offspring often bears a strong resemblance to the first male, which is supposed to arise from certain impressions made on the imagination or nervous system of the female. Although this is sometimes or often the case, we doubt very much whether it is so frequent as to be considered as a rule.

4. Although, in the crossing of sheep for the purpose of the butcher, it is generally advisable to use males of a larger breed, provided they possess a disposition to fatten; yet, in such cases, it is of importance that the pelvis of the female should be wide and capacious, so that no injury should arise in lambing, in consequence of the increased size of the heads of the lambs. The shape of the ram's head should be studied for the same reason. In crossing, however, for the purpose of establishing a new breed, the size of the male must give way to other more important considerations; although it will still be desirable to use a large female of the breed which we seek to improve. Thus the Southdowns have vastly improved the larger Hampshires, and the Leicester the hugh Lincolns and the Cotswolds.

5. Although the benefits are most evident in the first cross, after which, from pairing the cross-breed animals, the defect of one breed or the other, or the incongruities of both, are perpetually breaking out—yet, unless the characteristics and conformation of the two breeds are altogether averse to each other, nature opposes no barrier to their successful admixture; so that in the course of time, by the aid of selection and careful breeding, it is practicable to establish a new breed altogether. This, in fact, has been the history of our principal breeds.

We confess that we cannot entirely admit either of the antagonistic doctrines held by the rival advocates of crossing and pure breeding. The public have reason to be grateful to the exertions of either party; and still more have they respectively reason to be grateful to each other.

Let us conclude by repeating the advice that, when equal advantages can be attained by keeping a pure breed of sheep, such pure breed should unquestionably be preferred; and that although crossing for the purpose of the butcher may be practiced with impunity, and even with advantage, yet no one should do so for the purpose of establishing a new breed, unless he has clear and well-defined views of the objects he seeks to accomplish, and has duly studied the principles on which it can be carried out, and is determined to bestow for the space of half a lifetime his constant and unremitting attention to the discovery and removal of defects.

To Free Swine from Vermin.—A correspondent of the *Southern Planter* says, if your hogs are lousy, go to their rubbing place, or what is better take a rough twelve foot log to the feeding place, and keep it constantly smeared with tar. No spaniel ever loved water better than a lousy hog loves tar, and he applies it himself to the most infested spots on his body so effectually that the lice speedily disappear. I have seen 95 out of 96 hogs smear themselves with tar in less than thirty minutes after they had access to it; and not one had ever known its use before.

CARE OF SWINE.

RAISING PIGS.

This topic is not often systematically discussed in agricultural journals, yet it is well worthy of notice. The profit or loss arising from this department is supposed to depend greatly upon luck, some being almost uniformly successful and others unsuccessful; the latter always charging their losses to ill-fortune, rather than to their own bad management. In examining these cases of loss, we can almost always find that some of the conditions essential to success have been violated. Sows that lie in the open field almost always raise their pigs, especially in autumn. Those that are confined and subjected to an artificial diet, often will devour their own young, and sometimes continue it till they are several weeks old.

A breeding sow should have at least a moderate sized yard for exercise. She should be kept in good order, though we do not approve of excessive fatness. If the sows are fat, as is the case with sheep or cows, the young are small at first, but thrive finally on the rich nourishment afforded by the mother. The food should be a mixture of vegetables, cooked or uncooked, and apples, with a little grain. This food will keep the bowels in a free and natural state. Some claim that costiveness is the cause of their devouring their young, and this should be guarded against. Flowers of sulphur added to the food, a tablespoonfull occasionally, will serve as a mild cathartic, and is supposed also to be particularly healthful to swine.

As the time for pigging approaches, the sow should lie alone, where she can be quiet and arrange her own bed. If she has access to an abundance of litter, she will often collect an excessive quantity. When she is thus engaged, it is a sure sign that she is about to farrow.—When her period of sixteen weeks draws to a close, she should be closely watched to see that she has a proper bed of short straw, and not too much, for the pigs will get in a heap, and she is liable to lie on them. If she is to be changed to a different pen, it should be done several weeks previous to this time, so that she may get used to her quarters. If she does not like her bed she tears around her pen, and often breaks out to seek a more satisfactory place.

She should always be treated with kindness, and become used to her keeper, so that he can enter the pen at any time without disturbing her. She should not be compelled to climb over a sill to enter the pen, or be crowded against the sides of the door, but the quarters should be comfortable and easy.

If from any cause she is fractious and wild, tramples upon or neglects her young, or even devours them, they should be in part or entirely removed for a few hours till she becomes

more quiet. In place of the young pigs, she will eat half a pound or more of salt pork cut in slices, and perhaps this is the best remedy for her morbid appetite. The little pigs when removed may be fed often, but sparingly, on warm milk and water sweetened. They will drink readily from a spoon. We once lost a sow on the second day, and raised her entire litter successfully. We put a little warm milk in the trough, and then put in the pigs. They sucked away at each other's feet and soon drank the whole.

For the first day or two after farrowing, give only a little whey, or other weak drink. Later, when the milk flows freely, feed liberally with soaked provender or meal; bran is not sufficient—it must be mixed with other grain. There is nothing better than milk; and in dairy regions we choose to have cows come in before cheese making begins, that the sows and young pigs may have the skim-milk.

Age of Sows.—Sows may have pigs at seven months old, but it is better to have them at least one year old. By breeding from young sows, the size is diminished. An old sow may well raise two litters in each year. It is advised in selecting breeds to choose those with numerous teats; but we consider ten or twelve pigs in a litter as good as more. A full grown sow will raise more than a young one. If they do well and do not become cross, it is better to keep them for several years; we are more sure of the pigs and of raising them, and they are better than those from very young sows.

Spring and fall seem to be the best seasons for having pigs. Avoid extreme heat as well as cold. For cold weather use an apartment in the barn cellar, or have the pen well lined and banked up with earth.

COLIC IN HORSES.

Years ago, before nosebags were generally adopted, colic was more common than at the present day. In those days horses went out to work early in the morning and did not return until night, during which time, "owing to the want of some convenient mode for supplying them with food when out," they partook of none. The consequence was, they returned home with their vital powers exhausted by work, and with keen appetites, bearing no relation to the capacity of the stomach or to the digestive powers; with avidity they swallowed the food then placed before them; it then entered the stomach not sufficiently insalvated or masticated, rendering it impossible for the gastric juices to act on it. It is a physiological fact, that if food is not properly saturated with saliva in the mouth, it is with great difficulty that chemical action necessary to digestion is set up in the stomach—and colic results.

To remedy this evil, Prof. Coleman suggested the use of the nosebag, in order that the horse, when standing during the loading, or unloading to which he was yoked, might partake of food. The nosebag being generally adopted, cases of colic became rare, and happily continue so.

The horse has a very small stomach when compared with the rest of the alimentary canal, which is quickly emptied, and therefore requires to be frequently supplied with feed. From the above remarks we learn that it is better to supply animals with a small quantity of food, two or three times a day, in preference to a large quantity at one time. This plan I have proved over and over again to be a good practice; but, with all our care (sometimes owing to the exhibition of an improper quantity of deteriorated food, as bran, turnips, &c. or to a draught of cold water when the animal is heated—rarely however causing this disease unless in co-operation with other agents, as the effects of water are but transitory without them,) some animals have periodical attacks. When such is the case I imagine the animal is the subject of intestinal calculus or calculi. The disease, therefore, often consists of indigestion and stoppage of the bowels.

Effusible stimulants, as sulphuric ether, should be given combined with a sedative, as opium, followed by the administration of five drachms of aloes, with enemata, in order to evacuate the bowels, which are usually constipated. Blood letting is superfluous and generally injurious.

Bran should never be given to horses except in the form of a mash. If given dry, it becomes impacted in the intestines and forms a stoppage to the passage of the ingesta.

How to Increase the Value of a Cow.

Every one who owns a cow, can see at a glance that it would be profitable to increase the value of her, but every one cannot tell how to do it. We can, and we think that we can make it equally palpable to our readers. If a cow is kept for butter, it would certainly add to her value if the butter-making properties of her milk should be improved. In summer or winter this can be improved just as the yield of a cultivated crop can be improved, by what is fed to each, and it is simply a question of will it pay, in manuring the one or feeding the other. Indian corn will add to the quantity and quality of the butter to a very sensible degree, and it is simply a question of easy solution, by experiment, whether it will add to the profit of the butter maker to buy corn at one or two cents a pound, and convert a portion of it into butter at twenty-five cents a pound, or whatever the market price of corn and butter may be, and another portion of it into fat, and another portion of it into manure, for that is the natural result of the chemical change produced in the laboratory of the cow's stomach. The same result will follow any other kind of feeding. Good pastures will produce an abundance of milk, often as much as the cow can carry; but does it follow that even then it will not be profitable to feed her with some more oleaginous food to increase the quantity of butter just as it sometimes proves profitable to feed bees to enable them to store more honey? It certainly does appear to us that the value of a cow feeding upon ordinary winter food, may be almost doubled by making

that food suitable for the purpose of increasing the quantity of milk, if that is the purpose for which the cow is kept. Farmers generally understand that they can convert corn into beef, pork, and lard, and some of them know exactly at what price per bushel it will pay to convert it into these substances; but does any one know at what rate it will pay to convert corn or any other kind of grain into butter, or any other kind of feed into the dairy products? Is the whole business a hap-hazard one? We fear so. Some persons know that they can increase the saleable value of butter by adding the coloring matter of carrots to it. Does any person know the value of a bushel of carrots fed to a cow to increase her value as a butter-producing laboratory? Experimental proof upon this point would be far more worthy of agricultural prizes than it is to see who can show the largest sized roots; for by a few carefully conducted experiments we should be able to increase the value of a cow almost at pleasure.

MUSKEET GRASS.

"He is said to do much for his country who makes two blades of grass to grow where but one grew before."

The proper cultivation of the grasses is too much neglected in our mountain regions of country. Lands that are steep, rough, and generally unsusceptible of cultivation in any kind of hoed crops, may be made profitable by sowing in grass for sheep pasture. Those interested in sheep husbandry, wishing to have an abundance of grazing land, can, with very little expense, raise muskeet grass, which makes the best winter pasture for sheep that I ever tried. By hacking off the brush in the summer time when the leaves are full size, so that they will burn up clean when dry, it leaves the ground sufficiently cleared for the reception of the seed. The brush should be hacked off about two feet high, so that sheep can reach the top of the stump to nip the tender buds as they grow out. In a few years the stumps will die, leaving the ground mellow. This is an easy and sure method of clearing off woodland, and at the same time making it profitable to all who try it.—High, dry, loose land is better adapted to the growth of this grass than any other. It flourishes better where the other grasses do not grow well. Since sheep are inclined to graze on elevated land, which is often rendered barren and worthless for the want of proper cultivation, there can be made to grow the luxuriant muskeet, furnishing both winter and summer ample pasture, making it as profitable to the grazier as the richer low lands. Horses and cattle are likewise very fond of it, leaving the other grasses untouched so long as they have access to the former. In freestone regions where grass does not generally grow spontaneously, the muskeet takes hold better without plowing and brushing the ground, than any other. Muskeet grass remains green all winter, and takes an early start to grow in the spring. It is a beautiful grass when growing, soft like velvet, makes a heavy sod over the ground, is good when mowed for hay—making as much in bulk as Timothy, and when in bloom seems to be a favorite resort for the bee. The best mode to sow, is in the chaff, about two bushels per acre. Sow about middle of September or April. FARMER.

Fayetteville, Va.

Coal Oil will Cure Sweeny in Horses.

ED. VALLEY FARMER: Having tried coal oil for the cure of Sweeny in horses on two occasions, and having been successful in both instances in effecting a cure, I think I will confer a favor upon the public by informing them of the remedy.

And, first, what is the Sweeny? It is a shrinking of the muscles of the shoulder from inaction or want of use, on account of decreased or unhealthy circulation. A limb not used from lameness or injury for a long time, soon produces the sweeny. What is required, is to restore healthy circulation by applying some penetrating stimulant to the diseased part.—There is no better application than coal oil. It is very penetrating and stimulative. It is better for such diseases than any of the patent liniments yet got up. The oil should be well rubbed in by the hand, and a daily application made. Of course the horse should not be required to work when being treated—rest alone sometimes produces a cure. The horse should have a good pasture with plenty of shade, so that he may have just enough exercise to keep in good condition. Yours, S. H.

ADMINISTERING MEDICINE TO HORSES.—Geo. Beaver writes thus to the *American Agriculturist:*

I consider the usual method of giving medicine to horses by drenching, as it is called, highly objectionable. In this process, the horse's head is raised and held up, a bottle introduced into his mouth, his tongue pulled out and the liquid poured down. In his struggle, some of the medicine is quite likely to be drawn into his windpipe and lungs, and inflammation and fatal results sometimes follow. A better way is to mix the medicine with meal, or rye bran; make it into balls, pull out the horse's tongue, and place a ball as far back in his mouth as possible, then release his tongue, and he will almost certainly swallow the ball. Or the dose may be mixed with meal and honey, or other substance that will form a kind of jelly, placed upon a small wooden blade made of a shingle, and thrust into the back part of his mouth, when he will very easily swallow it.

BEST DEPTH FOR SETTING MILK.—A correspondent of the *Homestead* relates the following experiment: "On the 8th of April we set two pans of milk, weighing forty-seven pounds two ounces, in two tin pails ten inches deep. The

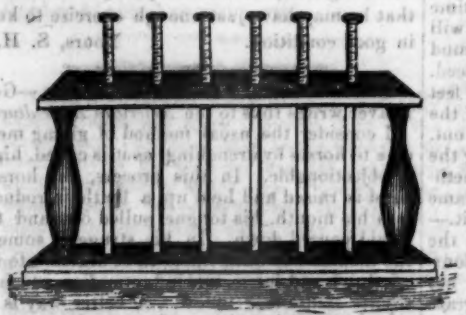
next day we set the same quantity of milk from the same cows two inches deep in pans. These were placed on the same shelf with the first, and of course in the same temperature, which was near 50°. In four days the first milk was sour and skimmed, yielding three pounds two ounces of cream, which, being allowed to stand one day, made one pound eight ounces of butter.—The other milk, standing the same length of time, yielded four pounds eight ounces of cream, making two pounds one ounce of butter—a difference of nine ounces in favor of setting the milk shallow. This is a gain of 37½ per cent. over the depth of ten inches."

HOW SWISS CHEESE IS MADE.—The manner the Swiss peasants combine to carry on cheese-making by their united efforts, deserves to be noted. Each parish in Switzerland hires a man, generally from the district of Gruyere, in the canton of Freyburgh, to take care of the herd and make the cheese; one cheese-man, one press-man or assistant, and one cow-herd are considered necessary for every forty cows. The owners of the cows get credit in a book for the quantity of milk given by each cow daily. The cheese-man and his assistants milk the cows, put the milk all together, and make cheese of it; and at the end of the season each owner receives the weight of cheese proportionably to the quantity of milk they have delivered. By their co-operative plan, instead of small-sized, unmarketable cheese, which each owner could produce out of his three or four cows' milk, he has the same weight in large, marketable cheese, superior in quality, because made by people who attend to no other business. The cheese-man and his assistants are paid so much per head of the cows in money or in cheese, or sometimes they hire the cows, and pay the owners in money or cheese. A similar system exists in the French Jura.

A NEW PAD TO PREVENT INTERFERING.—Mr. Wm. Somervill, a veterinary surgeon of this city, has shown us a pad, invented and patented by himself, to prevent interfering in the action of trotting horses. We think it uncommonly well calculated to effect the object, and there is a good deal of ingenuity in the plan.

The pad consists of a piece of india-rubber, made concave inside, so as to fit the hoof, and kept in place by means of its elasticity, and a tongue held between the wall of the hoof and the shoe. No horse can cut his knee with this pad upon his hoof. The method adopted to fasten it is entirely successful. At the same time it is so inconsiderable an addition to the edge of the shoe and the horn of the hoof, that at a very little distance it cannot be perceived.—[*Wilkes' Spirit.*

GARGET IN COWS.—I had, a few days since, a new milch cow, whose bag was very badly caked, so much so, that the usual remedies of cold water, soap suds, spirits of camphor, &c., had no effect upon it. I asked our family physician for a prescription, who gave me this:—1 part aqua ammonia; 2 parts sweet oil, well rubbed in twice daily. In two days a cure was effected.—[*Exch.*



THE LACTOMETER.

A convenient and most useful instrument for testing the richness of milk; a glass tube, showing the proportion which the cream bears to the milk of a cow, the principle being, if the new milk is poured into glass tubes and allowed to remain undisturbed, the division between the cream which floats upon the surface of the milk will be so evident, that its depth may be easily measured; and should the milk from any particular cow produce more cream than that of another, the difference will be seen by the division or marks on the glass tube.

The Lactometer consists of five or six glass tubes, about ½ an inch in diameter and 11 inches long, fitted into an upright frame, each tube having a fine line drawn around it, 10 inches from the bottom, and 3 inches from the line downwards; it is graduated into inches and tenths of inches.

At milking, each tube is to be filled up to the line with new milk, and after standing twelve hours the quantity of cream which floats upon the surface, is shown by the scale of inches and tenths—each division will, therefore, represent one per cent. of the whole, thus:

If the milk given by a cow at one meal is one gallon, or eight pints, and the thickness or depth of cream is 14 divisions, multiply the number of pints, 8, by the depth of the cream, 14, and the result will be that the produce of the cream of that meal is 112, or one pint, 12—100. Care must be taken to fill these tubes as soon as the bucket is taken from under the cow, and from the middle of it, which is done by dipping a vessel below the froth.—[*Boston Cultivator.*

HORTICULTURAL.

[Written for the Valley Farmer.]

Transportation of Strawberries—Varieties, &c.

Until I made the attempt, I doubted whether strawberries, and other soft and perishable fruits, could be sent in good condition several hundred miles by railroad. For two seasons prior to the present, I sent strawberries with entire success from Jackson, Tenn. to Chicago, a distance of 474 miles. Being far ahead of the season, they sold at an enormous price.—When the price fell below a compensating rate later in the season, they were sold in the home market. They were picked in tin cups, holding a pint each. These cups were placed in a chest, on a false bottom, which rested on springs—common spiral mattress springs. The chests were made to hold six cups one way, and four the other—being two dozen in one tier. This was found to be the most convenient size. The cups were made a half inch higher than necessary to contain a pint, so that they might hold this quantity without being so full as to be mashed by the next tier. Thin, light strips of cypress wood were laid across to support the next tier—two being placed over each row of cups. Thus four tiers were stowed snugly in the chest, making eight dozen. Over the top tier was put a thin battened board to keep all in place. As thus arranged, the slightest pressure would cause the springs to yield, and the whole load danced up and down at each step of the carriers when borne along. Cleats were nailed across the ends for convenient handling. Instead of a cover, there was an ice box 2½ or 3 inches deep, and just as large as a cover would have to be. This was of wood, with a square hole in the top, on which a block was neatly fitted and buttoned down. The bottom of the ice box was of sheet zinc, nailed on. As the ice melted, the water oozed out between the zinc and the wood and trickled down the outside of the chest, doing no damage. Some care is necessary to guard against the water running inside and filling some of the cups. It would be well to make a hole in the bottom of each cup, and also a gimlet hole or two in the bottom of the chest to provide for such a contingency. I have occasionally had berries injured this way. At the corners of the chest and on the outside, iron braces were screwed, projecting upwards a half inch, within which the ice box set; this kept it from slipping off in any direction. Two hasps, one at each end, and two padlocks opened by the same key, secured the whole. The ice box was replenished on the steamboat at Cairo.

The wood of my chests being white pine, for lightness, I varnished all the inside with shellac dissolved in alcohol, to prevent the possibility of imparting a taste. I have known all sorts of articles kept in a new refrigerator, taste strong of the pine.

The fruit was picked from forty-eight to sixty hours before it reached Chicago, and was often twenty-four to thirty-six hours on hand there, and rarely spoiled. It should be picked very clean. After so long a journey, I should think it would not well bear washing, and ought, therefore, to be sent in the nicest order. Mulching is indispensable to entire satisfaction in this respect.

In 1859, the first chest was sent to St. Louis on the 10th of May, and brought $30 for 112 pints. On the 11th, a chest was sent to Chicago, and brought $3.20 per gal.

In 1860, the first chest was sent to Chicago April 26th, and brought $4 per gal.

This year the first gallon was picked May 1st, and the whole crop was sold here, at $1.20 to 80 cents per gal.

The most valuable berry I cultivate, is one I got as McAvoy's Extra Red, though I doubt the genuineness of the plant. It came to me from a regular nurseryman of Cincinnati. It is pistillate; fruit large, often irregular, very dark crimson, about the color of Walker's Seedling; surface glossy, and rather smooth; flesh firm, bearing carriage well; keeps better than any sort I have; fruit ripens early; my earliest large berry. The largest one measured this season was five inches in circumference. I have another sort, derived from Cincinnati as McAvoy's Extra Red, which is very different. It is light in color, soft, rough as a nutmeg grater, and late. My most reliable variety against our hot and dry summers is one for which I have no name. I found a single plant in the garden of a rented house, and liking the fruit

propagated it. I do not know whether it is an old sort or a new seedling: at all events, I find it my earliest berry by a week or ten days. It is conical in shape and resembles Walker's Seedling more than any kind I am acquainted with, though it is not so dark, nor so glossy as the Walker, and hardly equals it in flavor, though it produces many berries of a larger size. In the latter part of its season, the berries dwindle, especially if the weather proves dry. It stands the heat and drouth admirably, and propagates rapidly, when almost every other sort is perishing. This is the kind for which I have obtained the highest price, being first in the market. It is a staminate. Thinking it might be Large Early Scarlet, I procured this sort from Cincinnati, and find it entirely different—small, sour, worthless, and not so early as the "Stoddert."

Wilson's Albany burns out in our summers; Victoria and Burr's New Pine, also. If I could have means of copious artificial watering, I would cultivate the Victoria for its great size and extraordinary beauty. McAvoy's Superior is valuable. Alice Maud and Triomphe de Gand have done nothing yet for me. Peabody's Hautbois is unproductive. Hovey's Seedling, Hooker's Seedling, Longworth's Prolific, Scott's Seedling, Marylandica, ditto. Genessee has done finely this season. Our long, hot, dry summers destroy many otherwise valuable varieties.

C. S. DOD.

A COAT FOR THE GARDEN.

I find it very little understood among farmers that black soil draws the heat of the sun—hence is better for corn, and vegetables in general. It is supposed that black soil *naturally* is rich, when it is the sun that is largely entitled to the credit. I have known red or yellow soils to be among the most fertile, and have seen black soils yield little when their strength was exhausted.

One of my neighbors makes it a business every year to keep the surface of his garden covered with a coat of black material—the blacker the better. He finds it of immense advantage. The mixture is made of ground, rotten wood, rotten manure, a little plaster, guano, and other fertilizers. These are more or less varied, but always with a view principally to the color of the soil. The blackest of ground is selected, whether rich or not. To this is added rotten wood, dry manure, a sprinkling of plaster, a little guano if at hand, sometimes a little lime, &c. All this is thoroughly mixed and pulverized, and kept in a dry place for use when wanted. As soon as the garden is made, a thin coat is sprinkled over. The sun at once takes hold of the black surface, and heats the the ground; while the rotten wood keeps the soil moist; and the manure, plaster, &c. add fertility; thus acting as glass, mulch, and fertilizer.

When the grass begins to makes its appearance, cultivate, and then add another coat. At each dressing add a coat. After a while the ground will be found to be in the most agreeable condition; pulverescent, dark, rich, and easily worked, imparting its color to the vegetation. The excess of labor is but little, as it takes but a few hours to cover a good-sized garden—and this will be made up by the greater ease with which the soil is afterward stirred.

I know several gardens that have been treated in this way, the soil of which is almost black as jet, and yet the mulch or coat is used. When black ground cannot well be obtained, powdered charcoal may answer the purpose. I have known black cloths to be spread round the hills of cucumbers, tomatoes and other sun-loving plants, with benefit. But these will not improve the soil.

My neighbor, above referred to, has the best garden in town. His cucumbers have never been equalled; they are good every year. It has been a practice of years with him, and done in the most unobtrusive manner. His nearest neighbors, wondering at his superior "luck," never knew of his mode; and it was only by accident, and while he was pulverizing rotten wood, that I became acquainted with his secret.

He only laughs at the idea of making a garden without his usual coat; says he never had a full garden before, nor an empty one since. A light-yellow soil in a cool season yields but lightly, even if rich; in a warm season never as well as a dark soil, even if equally rich. It is difficult to make a good garden out of yellow soil, as I know to my cost. But apply the black coat, and the magic effect will at once be seen. Try it.

F. G.

BLACK CURRANT WINE.—The very finest wines are now being manufactured from our fruits. We have red currant wine, blackberry wine, raspberry wine, and also cherry wine, cordial and brandy, besides peach and apple brandy, and a liquor from the pear; and thus far no use has been made of the black currant to any extent, save as a jelly or a jam. We learn that in France there is now being made the *liquer de cassis* in large quantities, from the black currant, and millions of plants are cultivated for this

purpose. It is said that it is so extensive near Dijon, where there is made in that town about two thousand gallons of wine annually, and so great an interest is felt in this fruit as almost to supersede the cultivation of the vine.

[Written for the Valley Farmer.]

Monthly Notes for the Garden and Orchard.

By Carew Sanders.

BULBS, TULIPS, HYACINTHS, &C.

Many persons, when they see a fine bed of Tulips and other handsome flowering bulbous plants in full bloom in the spring, are very anxious to have some, and are often disappointed when told that it is not the proper season, and that they cannot be moved; they however resolve to procure some another season. To all such we would give a reminder that the season is approaching when all these hardy spring flowering bulbs should be procured and planted in order to enjoy their beauty next year.

The best bulbs are annually imported from Holland by the principal florists and seedsmen of the country, and it is now none too soon to send for their catalogues, or to forward your orders, so as to insure a choice selection of varieties.

The best season for planting is the months of October and November, though they may be planted in any open weather after that up to Christmas or New Year's; but the earlier the better, as the bulbs commence to root anew early in the fall, and they bloom much larger and stronger from being well rooted early.

The following facts in relation to these bulbs are worthy of our readers' attention: The hyacinth rapidly degenerates in our climate, and although they will last and keep blooming several years without renewing, they become smaller and poorer every year, and in order to have first-rate flowers they must be renewed by fresh importations every season. The Dutch florists make it an especial and very extensive business to grow these bulbs up to a high state of blooming perfection, and immense quantities are sent each year by them to all parts of the world.

The tulip, when once obtained, may be grown in perfection for an indefinite period, without deteriorating, by taking them up every two or three years—or better, every year; taking the offsetts and planting in a bed by themselves, to make strong bulbs; and by planting the flowering bulbs in new soil, made rich by the application of rotten cow manure, and light by the use of sand and leaf mold.

There are several distinct classes or divisions of tulips, but the early and late bloomers are sufficient distinctions for garden purposes. The early sorts commence to bloom two to three weeks before the others; are dwarf, of brilliant colors, many double varieties among them; flowers broader and more open than the others; having also "selfs," or single colored varieties, as crimson, yellow, white, &c. This class only is adapted for pot culture, though equally well for the border.

The taller and later bloomers are equally desirable, having an infinite variety of pencillings and markings on red, white and yellow grounds. This class embraces the famous prize varieties of the European florists.

All the hardy varieties of Narcissus, as Daffodil, Jonquil, &c. are better if left in the ground a number of years, as they form large tufts or stools of flowering bulbs, and make a much finer display in that way.

The Crocus and Snowdrop may be kept for a long time by taking up the bulbs occasionally and replanting in a fresh place, or renewing the soil a little, and as they all multiply by forming offsetts or small bulbs, any one may, from a small beginning, by taking a little pains with their bulbs, have in a few years a fine display of these decorative plants at comparatively small cost or trouble.

THE PRINCE ALBERT POTATO.

We desire to call the attention of all lovers of a good potatoe to the above variety, not on account of its high sounding title or undoubted foreign origin (because we believe the good qualities of the potato had manifested themselves before the name was bestowed on it, and the name neither adds to nor detracts from its merits, but simply distinguishes it from other potatoes), but on account of its intrinsic merits, especially as a table potato.

We have cultivated it several years, and it has been known and highly spoken of at the East for several years longer. It produces a good crop and grows to a fair size, though not extra large; matures somewhat early, and appears to be perfectly healthy and free from disease; a clean, handsome potato; form, not the best for the cook (which is the round), being long, tapering to a point at one end, broad, shallow eyes, skin and flesh clear white, boils dry and mealy, and is a really superior flavored article, and appears to be equally good whether used as a summer or winter potato.

It is an English variety, and very much resembles another English sort, called the Fluke; some say they are the same, but we think not;

both are popular varieties in some parts of England, we are told.

Whether it is adapted for field culture for our markets, we are unable to say, but think we can safely recommend it for garden culture for family use. There is in every market a prejudice in favor of certain varieties of potatoes that are known, and it takes some time for a new kind to win its way to popular favor.

JAPAN GRAPES—THE JEDDO VINE.

Mr. Fortune, now in Japan, sends the following account of the Jeddo grape to the *Gardener's* (English) *Chronicle*:

"The vine of this district, which you may as well name at once the *Jeddo Vine*, produces a fruit of great excellence. The bunches are medium sized, the berries are of a brownish color, thin skinned, and the flavor is all that can be desired.

"This grape may be valued in England, where we have so many fine kinds, and most certainly will be highly prized in the United States of America.

"A few years ago I was traveling from Malta to Grand Cairo, in company with Mr. Bryant, the celebrated American poet and a genuine lover of horticultural pursuits. This gentleman informed me that, owing to some cause, our European vines did not succeed much on the other side of the Atlantic, and suggested the importance of introducing varieties from China, where the climate, as regards extremes of heat and cold, is much like that of the United States.

"I have never met with what I consider a really good variety of grape in China, and therefore have not been able to act on Mr. Bryant's suggestion.

"At last, however, we have a subject for the experiment, and I urged its importance on Dr. Hall, who is an American citizen, and who has already introduced a number of plants to his country from China. He enters warmly into the matter, and no doubt will accomplish the object in view. I therefore conclude this article by giving notice to your readers on the other side of the water to look out for the arrival of the Jeddo Vine."

HOW WEEDS MULTIPLY.

It has been calculated, at even a low average, that a single plant of the four following kinds, will produce as many as 16,400 seeds, and consequently the same number of plants:

1 plant of	Dandelion	produces	2,740.
1 "	Sow Thistle	"	11,040.
1 "	Groundsel,	"	2,080.
1 "	Spurge,	"	540.

Seed enough to stock three acres and a half with plants, at 3 feet apart.—[*Scottish Farmer.*

EFFECTS OF THE SUN ON FOLIAGE.

Never have we seen such disastrous effects of burned foliage by the direct rays of the sun, as during the late "heated term" the last week of July and first of August the present year. We have before known as high an average temperature, as severe a drouth—in fact longer and more severe; but think we have never known the heat from the sun to be so fierce and powerful. The temperature ranged for several days from 96° to 104° or 105° in the shade—a cloudless sky and parched surface earth. The foliage of the plants injured is not changed from green to brown or yellow, or dropped off from lack of feed supply, but fairly burned, just as it is when a focus is drawn through a lens, and a spot burned brown and crisp.

It first showed the burning on the south-west sides of plants, showing that the afternoon sun, from 2 to 3 o'clock, was the most powerful, but subsequently the south and south-east sides have been burned, and whole rows of certain things have every leaf that is exposed burned brown and dry on the south side of the row.

There is much difference among plants in regard to this burning, some not having suffered at all and others badly. Among fruits, the Red and Black Currants seem to have suffered much the worst; Gooseberries have lost nearly all their foliage by dropping, but are badly burnt where exposed. The leaves of the large fruit, Apples, Pears, Peaches, &c. do not appear to be as susceptible to injury as the smaller.—Many shrubs have suffered badly—the Snowball, Wiegelia, Honeysuckle, and many others, have quantities of their foliage burnt. Most all kinds of Evergreens seem to have suffered some, but the Norway and the Balsam Fir have suffered most, though it is only the young foliage that was exposed that was so burnt; indeed, it seems to be the younger leaves and the thinner leaved kinds that are most susceptible to this burning from old Sol.

We should be glad to learn over how wide a stretch of country this intensity of heat has ranged, and whether its effects are not unusually severe.

To PRESERVE HERBS.—All kinds of herbs should be gathered on a dry day, just before or while in blossom. Tie them in bundles and suspend them in a dry, airy place, with the blossoms downwards. When perfectly dry, wrap the medicinal ones in paper and keep them from the air. Pick off the leaves of those that are to be used in cooking, pound and sift them fine, and keep the powder in bottles corked up tight. Dr. Page, of Washington, D. C. says that herbs should be bruised or crushed while in the green state, and then dried. When so treated, they retain their color and odor for a great length of time.

[Written for the Valley Farmer.]

A WORD ABOUT STRAWBERRIES.

I have just eaten the last strawberry—the last (with regret) of the season. It was the sweetest of them all; deeper in tinge; more sun-scorched, and more nectarous. And now I remember what berries we used to gather in the meadows, deep in Timothy, with neighboring fields of red and white clover scenting the air—but not equal to the scent of the berry; not so red; not half so aromatic. Then there is the flavor—which is one with the scent, and which earth has not yet equalled. These are the poetry of the berry—and how much they soften the prose of life.

Some are gathered in woods, where they are of a different family (wild), the Indian of strawberries; long-necked, dark, but less sweet, for they have not the sun to elaborate their juices. The garden now cuts short our rambles, and brings us to a more circumscribed prose-view of the berry, for it is always true, "That we did not bring home the river and sky," in all that is shorn of its poetry. After all, to the majority of people, the real thing with the berry is its use. As a dish, of course it has not its equal—I mean among the sauces. The blackberry has its admirers; the writer is one of them. There is to him something "taking" in the glistening black, deep as ebony, and the rich unctuousness of a ripe blackberry. The doctors say there is no berry equal to it in a medicinal way. I can affirm all these qualities of the blackberry. But the strawberry is also medicinal. Doctors have observed the increased health of the people at the close of the strawberry season. I can testify to this in my own personal experience—otherwise this article would hardly have been written. With such blushing cheek, such winning breath (the life of the berry); modest and drooping head; surrounded with bird-songs and flower eyes; nestling close to the earth, and laying its soft, fair cheek on the rude ground; the immediate companion of the grass and the moss; the humblest, the lowliest, yet rising highest in estimation: with all these qualities—and we all have experienced them more or less—who would not welcome the strawberry? These surroundings, as I have said, are the poetry of the berry, and are, and ought to be, not its least attractive quality. It is this surrounding (of the poetical) in the world, that gives life its charm; even the miser feels it—he sees a sheen in the gold that is more than its value. Yet, with all its worth how little is the strawberry cultivated. How many gardens have it? The great majority are without it: four-fifths have it not. They content themselves by gathering the wild berry from the fields. And yet the labor to plant a bed of strawberries is next to nothing. It ought to be a pleasure and thus pay the labor.

Prepare your ground (thirty feet square will supply a family abundantly, with some for neighbors) by spading it as deep as possible.—The roots love a deep, mellow soil, not wet nor too rich. A sandy loam is perhaps preferable; but the soil should be as light and loose as possible. Instance the growth in new land, where light, black, vegetable soil prevails. The gardener knows a heavy, yellow soil will produce but few berries, of whatever kind, and little else generally but grass and weeds—but any soil rather than none. Plant in rows or hills, or in any way that suits the fancy, only leave space enough between to work freely with the hoe, for the grass and weeds must be kept out. The sun should visit every berry, so as thoroughly to ripen and sweeten it.

Guard against the cold by covering up your plants with straw in the fall, before winter sets in. They are somewhat tender. All this done—and it will be seen there is but little labor in it—and next May you will have an amount of large, fine berries for the picking, that will surprise you. You need not range the fields; but a step to your garden, ten minutes of delightful picking, and your table is served. And this lasts for a month, in which you may have berries at any time, whether it rains, or at night, and always fresh. Is not this a treasure? Is it not worth the trouble? which itself should be a pleasure.

When you have your berries, use them freely without stint or measure. Too many berries have never been eaten at any one time, not even by invalids. The more the better. Let them be as free as water to all, and at all times during the season. It will be a happier and healthier month on account of the berry. Use cream or sugar, if you like, or the thoroughly ripened berry without either. When once thus accustomed, cream and sugar will not be desired; for you can never improve the flavor of a strawberry, and there should be sweetness enough in it without the addition of sugar. But suit yourself, and be sure to put out your bed of strawberries.

What has been said about the strawberry, may, with nearly equal propriety, be said of other berries; that is the common edible ber-

ries of the country. They require much the same soil; are palatable and medicinal: they but continue the good effect of the strawberry, when that has done its work. I include the red and black raspberry, the dewberry, and the blackberry, particularly the latter. Berries are said to be astringent; but is not this owing to the season of the year, when the heat disposes to costiveness. I cannot say that I have ever experienced this effect of the berry. There is not much tannin in the berry, though tannin is very abundant in the roots of the plant. The seeds of the berry doubtless counteract the influence of what astringent property the berry may contain, acting mechanically upon the bowels, by increasing the peristaltic action, as is the case with bran in coarse or Graham bread.

Give us berries,
Fruits and cherries,
And like birds live we
Ever winging,
Ever singing
Sweetest minstrelsy. F.G.

[Written for the Valley Farmer.]

A New Grape—The "Gasconade."

This new grape, which I found accidentally in the vineyard of Mrs. Eberlin, a widow lady, residing about two miles from Hermann, may prove of value as a market fruit; although too little known to warrant a recommendation. I will here give a short description of it; leaving it to time to prove its merits.

Origin—Probably a seedling from the Isabella, as there are Isabella vines around it. It had fruit, as near as I can ascertain, but once, last summer. It was an entirely new thing, it seems, to the lady who owns the vineyard, and attracted my attention by its extreme earliness, being fully colored and palatable before the Isabella berries even softened, and by the large size of the berry. It also shows all the characteristics of the Isabella class, in wood, leaf, and berry.

Description—A strong, and seemingly healthy grower; leaves resembling those of the Isabella, but larger and healthier; bunch, large, rather loose, not much shouldered; berry, very large, fully and inch long, oblong, black, pulpy, but not as much so as the Isabella; juicy and sweet, of decidedly better quality than the Isabella, ripening at least ten days before that variety. I think it is a fruit of much promise, and have purchased the original vine, which had been much neglected, and transplanted it with fine success this spring. It is growing vigorously, and promises a crop of fruit next season. I also have a fine graft of it, which has made a growth of fifteen feet this summer, besides about twenty-five plants grown from single eyes. It may prove very valuable as a market grape, but wants, of course, several years trial to determine its merits.

GEO. HUSMANN.

BOTANICAL EXPLANATIONS.

From the French of Breant and other sources we have compiled a few things which every cultivator should know, in order to enjoy and understand our modern rural literature. All plants are contained in three groups:

1. ACOTYLEDONOUS Plants, or those which, in germinating, do not develop the peculiar small seed-leaf, known to botanists as a cotyledon. This group includes all flowerless plants, such as mosses, fungi, ferns, &c. Mushrooms, and a few ornamental ferns are about all the plants it contains of interest to the gardener.

2. MONOCOTYLEDONOUS Plants, or those which in germinating produce, at first, a single cotyledon or leaf, different from those, which, a little after vegetating, dries up when the leaves following reach a certain stage of development. In this group are all plants with leaves, of which the veins are parallel, such as lilies, the grasses, palms, and it abounds in plants of great beauty and interest to the cultivator.

3. DICOTYLEDONOUS Plants, or those which in germinating develop two cotyledons, as the seed-leaves of the bean or melon. These are followed by two other leaves, which differ always from them, and sometimes also from those that follow, in which case they are called primordial. No plants are known which have more than two cotyledons.

The office of the cotyledons is to furnish the embryo the nourishment necessary to develop the *radicle*, or first rudiment of the root, and of the *plumule*, or first rudiment of the stem.—Cotyledons, hence, should never be injured or removed.

As the plant begins to develop itself, the plumule lengthens itself in the opposite direction from the radicle and becomes the stem, while the latter, striking downward, becomes the root.

The STEM or ascending axis. This takes different forms, as—1. The *trunk*, always ligneous (of a nature like wood), gradually diminishing from base to summit, and ramifies into branches, or branchlets. 2. The *stipe*, or stem, peculiar to the palms. 3. The *culm*, or jointed stem, peculiar to the grasses, herbaceous in most of them, but ligneous in the bamboo. 4. The *scape*—not a true plant stem, but a leafless flower stem, which springs from the scales of a bulb, the collar of a root, or the axils of the leaf in those plants of which the true stem, connecting the leaves and root, is very short.—5. Certain forms of stem that cannot be classed under these four forms, and hence preserve the general name of stem. Plants which lack an apparent stem, are called *oculescent*.

The stem, as well as the roots and the entire plant, is *annual* when it lasts but one year; *biennial* when it last but two years; and *perennial* when it lasts many years. In these three cases ordinarily the plant is understood to be

herbaceous, or of a soft texture, like a herb. It is ligneous, when with a stem of the consistence of wood. Such plants, when with single stems at least twenty-five feet in hight, are *trees*; but if they branch from near the ground and do not attain the above hight, they are *shrubs*. Shrubs nearly the size of a tree, or of like habit, are said to be *arborescent*. Woody plants, of humble stature, with stems little above the surface, are called *undershrubs*, or suffruticose plants; if less decidedly woody, they are termed *suffrutescent*.

Stems too weak to stand erect, but which rest upon the ground, rising near the extremity, are *decumbent*. If they rise obliquely from near the base, they are *ascending;* when they trail flat on the ground, they are *prostrate* or *running*.—When such stems take root, as they often do, from their under surface, they are *creeping;* they are *climbing* when they cling to other objects for support by tendrils or rootlets; and *twining* or voluble when they coil spirally around other plants within their reach.

Stems are either *solitary* (one from a root), or *multiple*, i.e., many spring from the crown of the same root; *simple*, without branching; *ramose*, divided into branches; *dichotomous*, forked in two branches; *trichotomous*, branching in threes.

In monocotyledonous plants, the depositions of new woody matter are made in the interior of the stem and intermingled with the old wood near the centre, and enlargements of the stem take place by the gradual distension of the whole; hence these plants are called *endogenous* or *inside growers*. The stems of dicotyledonous plants are increased by the deposition of the woody matter in annual concentric layers between a central pith and the outer bark. The new wood is deposited yearly around the preceding layer and next the bark; hence, the dicotyledonous plants are called *exogenous*, that is *outside growers*.

As to form, stems are *cylindric*, like a cylinder, but tapering gradually; cylindraceous, nearly cylindric; compressed or flattened on two opposite sides; winged, having membraneous expansions, &c.

PACKING FRUIT.

In no art are we more deficient than in that of packing fruit so that it may be carried a long distance without injury. Three-fourths of all our summer fruits sent to market any considerable distance, is more or less injured. Indeed, much that is brought to cities by growers only a few miles distant is scarcely fit for sale. Occasionally fruits are sent us with a request to exhibit them at our Horticultural Shows, but in most cases the specimens are so injured when received as to be entirely unfit to show. Mr. Kidd, gardener to the Marquis of Broadalbane, who sends fruits and flowers from the garden near Hampton Court, England, to the Highland residence of the Marquis, subject to five hundred miles carriage, is so successful in packing that he can send fully ripe tomatoes "without losing a fruit," and boquets that when received will be as fresh as when first picked. He gives his method of packing fruit as follows: "I have found no better method in all my experience, which has extended over a period of twenty years, with all kinds of fruit, varying in distance from fifty to five hundred miles. It simply is—box, soft paper, and sweet bran. A box is chosen, in size, according to the quantity to be sent. A layer of bran is put at the bottom; then each bunch of grapes is held by the hand over the centre of a sheet of paper; the four corners of the paper are brought up to the stalk and nicely secured; then laid on its side in the box, and so on until the first layer is finished. Then fill the whole over with bran, and give the box a gentle shake as you proceed. Begin the second layer as the first, and so on until the box is completed. Thus, with neat hands, the bloom is preserved, and may be sent to any distance; but with clumsy hands, quite the contrary, and often an entire failure, as the putting in and the taking out of the box are the most important points to be observed. I have invariably packed sixty or eighty bunches of grapes, and fifty or sixty dozen of peaches or apricots in one box, and received letters from employers to say that they have arrived as safe as if they had been taken from the trees that morning."—[*Rural New Yorker.*

[Written for the Valley Farmer.]

Calendar of Operations in the Vineyard.

BY GEORGE HUSMANN.

SEPTEMBER.

As this is the month for gathering most of the grapes, either for market or for wine, a few hints on both processes will be all that is required.

MARKETING THE FRUIT.

For this purpose provide yourself with broad, shallow boxes, made of light wood. They should not be larger than to hold from twenty to forty pounds, and about six inches deep inside. As soon as your grapes are well colored, go through and take the ripest bunches, carefully picking out all unripe and decayed berries. Handle them carefully, so they are not bruised. Weigh each pailfull, deducting wait of pail, before packing. Pack in green leaves—vine leaves are best; laying a layer of leaves on the bottom of the box, then a layer of grapes closely packed; then a layer of leaves again, and so on, until the box is full, putting a thick layer of leaves on top. Take care to shake them down well, so that all the spaces in the box are filled; nail the cover over them; mark the number of pounds on the cover, and they are ready for shipping. If carefully packed, they will come to market in as good condition as if just cut off the vines.

GATHERING GRAPES FOR WINE.

For this purpose the grapes should be very

ripe; so ripe, that some of the berries begin to shrivel; for the riper the fruit, the better the wine—the more body and aroma it will have. We seldom gather here for wine until the last of September or beginning of October. In cutting your grapes, carefully pick out all decayed and unripe berries. Mash your grapes, either with wooden pestles, or by running them through the rollers of a mill made for that purpose, and set so that it mashes the berries without breaking the seeds. Hickock's Cider Mill, or almost any other cider mill, will do for this purpose, if the upper cylinders are taken off. The mill is set on boards over the fermenting tub, so that the mashed grapes as well as the juice will drop into it. They may remain in this tub for a shorter or longer time, just as you may prefer a lighter or darker colored wine. If pressed soon (say after 24 hours) you will have a light colored, mild wine; if left longer, say two to three days, the wine will be darker in color, more astringent, not so pleasant, but keep longer. Before pressing, draw off the must from the fermenting tub; then pour your grapes on the platform of the press, say two feet high; put on strong boards to cover them, and lay scantlings across to receive the pressure. After pressing down, cut off the sides of the cake or cheese with a hatchet or an ax, and put those grapes which you have cut off on the top of the cheese, then press down again. Repeat this operation until the cheese is perfectly dry, say four or five times. If you have new casks to receive the must, scald them well with hot water to draw out the tannin; then put in cold water, so that they are perfectly clean and cool; then let them dry, and fumigate slightly with sulphur. It is still better to take about a tablespoonfull of the best Catawba, or Cognac Brandy, pour it into the cask, and then burn it. This will fumigate it thoroughly.

The casks are now ready to receive the must. Fill them to within about a hand's breadth of the bung, then lay a few vine leaves on the bung hole, and over these a small sack filled with clean sand. This will exclude the air, and yet allow the gas to escape in fermenting.

Observe the utmost cleanliness in these operations, washing all the implements frequently to prevent souring.

Gardening in England.—At the sea-side residence of Queen Victoria, a large portion of the pleasure grounds is appropriated to the young Prince and Princesses, who have each a flower and a vegetable garden, green-houses, hot-beds and forcing frames, nurseries, tool-houses, and even a carpenter shop.

Meramec Horticultural Society.

Sunhill, 1st Aug. 1861.

The thirty-second monthly meeting was held at the residence of Chas. Paffrath. The President in the chair. The minutes of last meeting read and adopted.

The following report on the holding of an exhibition, was received and adopted:

In view of the unhappy condition of our recently prosperous country, and the derangement of its business affairs, our Society, with seeming unanimity, have signified that it would not be prudent to hold our usual annual fair. But as we are providentially blessed this year with unusually abundant crops of fruits, grains, and vegetables, and as many of the finest varieties of fruits will thus for the first time be exhibited in our district, it has been thought that we might, with much propriety, profit, and pleasure, have an exhibition of the samples of our various crops, etc. dispensing with premiums, and much of the formula of a regular fair.

Your Executive and Special Committee therefore recommend that such an exhibition be held on Thursday, the 19th Sept. next, at the School House in Allenton, and that members of the Society, and all others feeling so disposed, present specimens and samples of their various crops and productions at the time and place above named. We further recommend the following rules for the government of the exhibition, viz:

1. All exhibitors are requested to have their articles, as far as practicable, carefully named and labeled, and delivered at place of exhibition previous to 9 o'clock, A.M. The names of the exhibitors to be attached or not, at their option.

2. The President shall appoint a superintendent for each of the following departments, to-wit: Fruits, flowers, vegetables, grains, ornamentals and miscellaneous. Each superintendent shall provide such assistants as he may find necessary.

3. The exhibition to be open to the public at 10 o'clock, A.M.

4. A recess from 12 to 1 o'clock to partake of a picnic dinner.

5. It shall be the duty of each superintendent to furnish the Executive Committee with a list of names of exhibitors, and the articles exhibited in his department, with such remarks in regard to peculiar merit as he may deem expedient.

6. The exhibition shall close at 4 o'clock, P.M.

T. R. Allen, Chairman.

The President appointed as Superintendent of Fruit Department, Dr. A. W. McPherson; Flowers, Wm. Muir; Vegetables, Oliver Kittredge; Grain, L. D. Vetaw; Ornamental, Edward Vaughan; Miscellaneous, P. M. Brown.

Grape Rot.

Mr. Muir exhibited several bunches of the wild summer grape, nearly all the berries of which were affected with rot. He stated, that after observing this disease for years, he had concluded that our native varieties are much more subject to rot than foreign varieties, and that the further we depart from the native in obtaining new varieties, the more free they are from rot. All our wild grapes, and all native varieties rot badly. The Isabella and Catawba are examples, and the older the vines, the worse the disease.—The To Kalon, Diana, and some others are less affected. Of the Concord, out of thirty vines you will find about twelve bunches rotted. Hyde's Eliza and Delaware have not yet been affected. Altitude seemed to make but little difference. Bunches at the greatest distance from the root seemed to be least affected. If insects are the cause, it is in a very remote degree.—Neither does it depend on the hygrometric state of the atmosphere, nor the dew. This is an important subject, and now is the time to observe and make inquiries.

Mr. Paffrath thinks insects are the cause, and recommended frequent working among the vines to keep them off.

Mr. Braches had a similar opinion. A neighbor of his, Mr. Woods, had allowed his vineyard to become overgrown with grass, making a perfect mat over the ground, and his grapes were good. The rot on wild vines is worse where the ground is bare than where it is covered with leaves or grass. Thinks it is because better quarters are afforded for the insects. He had not seen these insects. The rot made its appearance worse after a rain and a warm night, and in the shade, or on the windward side. His grapes were rotting. His vines overbore last year, and that with the drouth had weakened them.

Mr. Muir said the first appearance of the rot was by a small white speck—no mark of any insect can be discovered.

Mr. Arnoldt thinks the cause is atmospheric.

APPLES.

Dr. McPherson presented samples of an early apple which had been in bearing with him four years, and has proved an excellent regular bearer, not inclined to overbear. It begins to ripen with the Red June, and ripens gradually. The crop is now about half gone—some on the trees are quite ripe, and some still hard. It is fine for cooking in its unripe condition, and when ripe is excellent for dessert. Thinks it one of the best of the season. The tree is upright and regular in shape. The fruit is of good size, yellowish white, mild sub-acid, good flavor. Does not know the name.

The President said it answered the description of the Kirkbridge White, but it might possibly be the Summer Bellflower.

Mr. Arnoldt said it was not the Summer Bellflower of Ohio.

Dr. McPherson exhibited Duchess of Oldenburgh, of large size, but not yet in season. The tree was a good grower and early bearer. He thought it a good market and cooking variety.

Mr. Muir said he had found the grafts liable to winter kill in low situations, and suggested that it should not be planted on low ground.

Samples of the Striped June (Bevan's Favorite) on the table, were large and handsome.

Mr. Becker said it was earlier and larger than the Red June, and not so acid. Tree upright, good bearer.

Mr. P. M. Brown concurred.

Mr. Geyer, of Kirkwood, said that the Red Astrachan had proved a good bearer; fine for market; bears carriage well. The samples are over-ripe. It is not as early in coming into bearing as some others.

The Golden Sweet, presented as Lyman's Pumpkin Sweet. Mr. Muir said it was an abundant, regular, and early bearer; the fruit always fine and fair, and in general esteem. Others concurred.

PEACHES.

Mr. Braches said the Red Cheek Melocoton was the earliest peach he had in cultivation. It is a profitable market variety, but rather apt to be killed in the bloom in winter, and more injured by the curculio than some others. He thought the Early Crawford suffered less. George the Fourth comes after the Red Cheek; the tree is more hardy, and the curculio not so bad upon the fruit. Grosse Mignonne was a magnificent peach, but it had been hard to get it to perfection on account of the curculio.

PLUMS.

Branches of a small reddish plum were presented by Mr. Braches, so crowded as to resemble immense bunches of grapes. Mr. B. stated that it was a variety presented to Mr. Richter by a gentleman from France. He had better success with this than any other variety—finds the tree hardy, a good annual bearer. It does not seem to be injured by the curculio, as it bears very full. Does not know the name.—It had been called by a gentleman in St. Louis the Red Gage.

The Katrina has never borne full on account of the curculio, but it is large, rich and fine.

The Magnum Bonum was large, fair, and bore very full crops.

The Green Gage was a fine plum, but had proved a shy bearer here. Quality excellent.

Dr. McPherson stated that his Lombard plums had escaped injury from the curculio, while other varieties in an adjoining row were all lost. His Chickasaws had failed to bear full crops but one year out of eight.

Dr. Beale's experience with the Chickasaw had been nearly the reverse.

Mr. Allen said that his cracked and fell prematurely.

The Executive Committee proposed the continuance of the same subject at the next meeting, viz: "The Miscellaneous Articles on the Tables." Adopted.

The next meeting to be held at the house of Mr. Wm Harris, near Allenton, on the first Thursday of Sept. at 10 A.M. Meeting adjourned.

WM. MUIR, Sec.

ABOUT PLANT LICE—APHIDES.

Plant lice (aphides) are a very numerous and small species of insect of the order *Hemiptera*. They are destructive to most kinds of plants to a greater or less degree. The varieties are nearly alike, having small, oval bodies, generally of a greenish or light color, and nearly all without wings, although the full grown males and females appear winged at some seasons of the year. They are very prolific, being oviparous and viviparous. Several generations are produced during the summer, and in autumn the winged females lay eggs from which the lice are hatched the succeeding year. They suck or pump out, and live upon the juices of plants, for which purpose they are supplied with a long needle-like beak. They are also provided with two tubes on the posterior portion of their bodies, from which issues a sweet, gummy substance, known as honey-dew. In some places these insects are termed, "ants' milch cows," because ants are very fond of this honey-dew, and may always be observed feeding on it, and even sucking the tubes. Therefore, whenever ants are seen running up and down on plants, the plant lice are pretty sure to be found, and the ants are in many cases supposed to be the offenders.

Plant lice have many enemies of their own nature, and are to some extent kept in check by them. Many species of wasps and flies destroy them. The aphis-lion lives on them, and their greatest enemy is the lady-bird and many carnivorous beetles.

So much for the insect; now I will tell you how I stopped their destructive progress, and rid a shrub of them. It was wash day, and there was plenty of strong suds; so filling a pail with blood-warm, strong soap-suds, I took my syringe and gave the whole tree a thorough drenching with suds. I syringed it vertically, horizontally, and obliquely, being careful to throw some of the liquid up under the curled leaves, for these insects cause the leaves to curl up, and in many cases a wart or excrescence is formed on the under side of the leaf, in which reside a teeming population of these small destroyers. However, after twice repeating the operation on the succeeding days, the insects were routed, and the snowball left but little the worse for the usage.

PHYSICAL CULTURE.

BY G. B. WINDSHIP, M. D.

From the manner in which great truths have been recognized at one time and neglected at another in the world's history, it would almost seem as if they had their revolutions like the sun, and were destined at one period to shed light and warmth upon mankind, and at another to be borne so far from us in their orbits as to shed but a wintry radiance. The essential fact in education that a proper culture must unite strict care for the body with a judicious mental training, was better appreciated and understood in ancient Athens in the time of Plato, than in our own time in that tri-mountainous city sometimes playfully called the "Modern Athens."

The present movement in behalf of physical culture would seem to encourage the belief that a revival of some of those great convictions in regard to education, which prevailed in ancient Greece, is now about to dawn. In its full sense, education is a leading forth of the faculties of the mind through the healthy development of those of the body. In physical culture, I would comprehend culture of the body in its most extended sense—not of the trunk alone, but with it of the neck, head, and limbs, and of whatever of us is material. It is the application of means for physical improvement; the avoidance of habits that infallibly involve physical degeneracy; the development of the bodily powers; the conversion of disease into soundness, of weakness into strength, of awkwardness into grace, of disproportion into correspondence; in short, the elaboration and finishing of the edifice in which mind resides, that temple made of clay, that house we live in.

Improvement of one's physical state can never be entered upon too early, and so long as there is an atom of life and strength, never too late. Let no one despair of success in the attempt. Dr. Warren, in his little work on Health, tells us of a member of the legal profession who practiced gymnastics for the first time, and with the happiest results, when nearly seventy years old. Cornaro, the Italian, whose treatise on Health and Long Life has given him a world-wide reputation, began at forty to repair the damages which many years of dissipation had made upon a constitution naturally infirm; and in spite of the predictions of all his physicians and friends, he succeeded, not only in restoring the health he had lost, but in gaining a health he had never before experienced. He was eighty when he published his treatise, lived to see it through four editions, and died tranquilly in his bed after he had completed his one hundredth year.

In this connection it is worth while to observe how much may be accomplished by simply correcting a single bad habit. The legal gentleman to whom Dr. Warren alludes, was much benefitted by gymnastics. On the other hand, Cornaro, as he himself states, found a panacea for all his ills in a careful avoidance of intemperance in eating and drinking. It is indeed of little consequence what path we pursue, if by it we can reach the desired goal, *tuto, cito, et jucunde.*

Sometimes it may be inconvenient to take the best path: let us, then, do the next best thing. At at early age I was told by many that to practice a heroic degree of self-denial, and to rise from the table hungry, was the way to secure health. For many years I tried to do this, but succeeded very imperfectly. I at length resolved to attempt the next best thing, and I am not sure that it was not the best thing of all. It was merely this, to put no extra restraint upon my appetite, to practice no very rigorous self-denial, but to eat and drink about as much as I desired, and then by my subsequent self-management, to take care that I should make myself need every particle I had swallowed.

Soon after I began to carry out this principle, I experienced a cessation of indigestion, and the many ills to which it gives rise. Having found, too, that this principle worked well in the long run, I still retain it as one of the cardinal rules in my method of training.

And what is my method? you will perhaps inquire. It is the doing the right thing in the right way way, at the right time. It is the attaining a sufficiency without going to excess.—It is the using of my own discretion about everything, without blindly following another's precept or another's example, or even tying myself down to rules of my own devising. It is the carrying out of what may seem to be the expediency of the moment. It is the doing of what may seem best under the circumstances.

But though it may be difficult for me to describe briefly and clearly what my method is—that is no argument against its efficacy. What other method would have insured for me an appreciable gain in strength, day by day, month by month, and year by year, with an almost entire exemption, meanwhile, from any but the most trivial disorders? Let the following facts speak for themselves:

I was nearly seventeen years of age before I seriously undertook to improve my physical condition. I was then but five feet in highth, and a hundred pounds in weight. I was rather strong for my size, but not strong for my years, and my health was not vigorous. I am now twenty-six years of age, five feet seven inches in highth, and one hundred and forty-eight pounds in weight. My strength is more than twice that of an ordinary man, and my health is as excellent as my strength.

What has produced this astonishing change in my physical condition during the last nine years? I will attempt to sum up a few of the

proximate causes that may have led to this result:

1. I have breathed an abundance of pure, fresh air almost constantly.

2. I have exposed myself sufficiently to the sun.

3. I have eaten an abundance of wholesome food.

4. I have drank less than a quart of spirituous liquors, and less than a gallon of fermented.

5. I have used less than an ounce of tobacco.

6. I have taken nearly every day, about a half hour's gymnastic exercise in the open air.

7. I have conformed to the customs of society only so far as they were not at variance with health.

8. Regarding procrastination as the thief, not only of time, but also of health, I have shunned it as especially dangerous in all matters pertaining to physical well being.

9. I have poisoned myself as little as possible by food contaminated with lead, copper, brass or bell metal.

10. I have developed my body harmoniously.

11. I have allowed myself at least ten hours rest in almost every twenty-four.

12. I have paid a due regard to bathing, without, however, rendering myself amphibious, or carrying a good thing to excess.

13. I have been particular that every portion of my dress should be as loose and easy as the freest action of my muscles and limbs would demand.

During these nine years, while endeavoring to promote my physical welfare, I have made the following discoveries:

1. That whatever increased my strength, improved my health.

2. That one means of improving my health was to increase my strength.

3. That the stronger I became, the healthier I became.

4. That it was as easy for me to increase the strength of my body as it was that of a magnet.

5. That by developing my body harmoniously, I could preclude the possibility of hernia, or any other serious injury, that otherwise might arise from an exceedingly violent action of my muscles.

6. That lifting, if properly practiced, was the surest and quickest method of producing harmonious development; while it was also the most strengthening of all exercises, and consequently the most healthful.

7. That it was better, while exercising, to perform twenty different feats once, than one feat twenty times.

8. That it was possible for me to take in fifteen or twenty minutes, all the gymnastic exercise that I should need in twenty-four hours.

9. That I could gain faster in strength by forty minutes gymnastic exercise once in two days, than by twenty minutes of the same daily.

10. That as my strength increased, my exercise should be more intense, but less protracted.

11. That increase of the muscular power was attended with increase of the digestive.

12. That one means of increasing the digestive power, was to increase the muscular.

13. That many articles of food had formerly proved injurious to me, not because they were really unwholesome, but because I was unable to digest them.

14. That a person may become possessed of great physical strength without having inherited it.

15. That by increasing my strength, a predisposition to certain disease may be removed, and diseases already present, removed or mitigated.

16. That increase of strength cannot long continue on a diet exclusively vegetable.

17. That increasing the strength made excretion take place less from the skin, but more from the lungs and the other emunctories.

18. That what benefits a part of the body, benefits more or less the whole.

19. That long before I succeeded in lifting 1100 pounds with the hands, or in shouldering a barrel of flour from the floor, I had ceased to be troubled with sick headache, nervousness and indigestion.

20. That a delicate boy of seventeen need not despair of becoming in time a remarkably strong and healthy man.

Having made the subject of health and strength a speciality for so many consecutive years, and with a success that has excited much interest, it may be pardonable in me to offer the following rules for the promotion of physical culture:

1. Select, if possible, for your sleeping apartment, a room on the sunny side.

2. Let the sun have access to it at least six hours a day.

3. Keep it thoroughly ventilated the whole time, particularly during the night.

4. Contrive, however, to have it thoroughly ventilated without subjecting you to too great a draft.

5. Practice general ablution at least once a week in cold weather, and twice a week in warm, but seldom oftener in a New England climate. [In offering this rule I expect to be censured by quite a large class in the community whom seem to delight in daily soaking and splashing in water, not having, probably, the slightest consciousness that by so doing they defeat every intention for which water is externally applied.]

6. Allow yourself not less than eight hours' rest as a daily average. [I allow myself not less than ten.]

7. Never, while in good health, let the temperature of your apartment, when heated artificially, get above 70° Fah. [I prefer, for myself a temperature of about 60°.]

8. Keep the atmosphere of any apartment you occupy sufficiently pure, by occasionally opening the windows; and sufficiently moist, when it is being artificially warmed, by the constant evaporation of water.

9. Never forget that the combustion of any inflammable substance is invariably productive of poisonous gases.

10. Never use food of any kind, if you can conveniently avoid it, that you have reason to

believe was prepared in a copper, brass, or bell-metal utensil, no matter how scientifically such utensil may have been "protected."

11. Never use water internally or externally that has come in contact with lead or any other poisonous substance, if you can have choice of that which has only come in contact with iron, gutta percha, or glass.

12. If you must use water that has come in contact with a poisonous substance, neglect no expedient for rendering such water as nearly free from it as possible.

13. Use that kind of food which you most prefer, if your experience is not against it, without regard to what Liebig has said of its chemical constituents, or Beaumont of its digestibility.

14. Never rise from the table hungry, if you are not an invalid, but completely satisfy your appetite. The digestive power, like the muscular, will be weakened if not vigorously exercised.

15. Avoid excessive exercise of either mind or body, lest you create a necessity for narcotics and stimulants.

16. Avoid too little exercise, for the same reason.

17. Increase your strength, as one means of improving your health.

18. Practice lifting, as the most strengthening of all exercises, and consequently the most healthful; but practice it with the utmost caution, until you have ceased to have any weak point.

19. Use dumb bells as a means of exercise to be ranked next to lifting in importance, and let them be always as heavy as you can conveniently handle; but use them with great caution, and never for a longer time than ten or fifteen minutes in the course of a whole day.

20. Develop the body harmoniously, in order that you may preclude the possibility of hernia, or any other serious injury which otherwise might result from a violent action of your muscular system.

21. Never let the duration of gymnastic exercise exceed a half hour daily, or an hour once in two days.

22. Never rise early unless you retire early, or sleep with your windows closed, or have something to attend to which will not permit you to lie late.

23. If you retire late, or sleep with your windows open, lie until you feel like rising, whatever may be the hour.

24. Gradually wear less clothing about your neck, until you wear so little that you can at any time allow your neck to be entirely exposed without being liable to take cold.

25. Be careful that your dress is at all times loose and easy in every particular.

An "Arkansaw traveler" says that he knew a young fellow down South who was so fond of a young lady, that he rubbed off his nose kissing her shadow on the wall.

"Do you understand me, now?" said a pedagogue to an urchin, at whose head he threw an inkstand. "I've got an *inkling* of what you meant," replied the boy.

[Written for the Valley Farmer.]

HINTS.

A man's style should be himself. This will give him individuality among writers. The true author *talks on paper*—not as fops talk, or people prose: he utters himself. If he has nothing to utter, he will be silent: he never prates nor plagiarises. His words, when they come, are the life of the man. "Cut them," says an eminent sage, "and they will bleed."

A constant wrangle is the destiny of love. It grows out of it as changes out of April. Why? Because love is a passion, and passion is subject to rising and falling inflections. Hence, ever varying, and (alas! for our prospects) necessarily so. Still, we cling to it. This, perhaps, is also necessary: we are willing to be deceived.

Marriage is a different thing—has nothing to do with love—knows it not. It always precedes it; never follows. Montaigne says he would never have married, not even Wisdom herself, had not the current of custom forced him in.—The gate of marriage is not the gate of love. Through the gate of marriage go merchandise and money, distinction and renown, sustenance, and even hatred and revenge; but rarely love—in its stead, sentiment, respect. For marriage breaks the charm of the fancy, and the bubble is burst.

"A gentle wife—but fairy, none."

Selfishness has received many hard knocks in the world; but it is not so odious as we suppose. To begin with, it is universal, both in man and beast, notwithstanding the prating about disinterestedness and benevolence. It holds all our enjoyments, and just fits the measure; benevolence among the rest; for the sweets of benevolence are relished by self. It is but another, a finer name for selfishness.—The veil removed from both, they would stand twins.

All the great men in the departments of life are thinkers; and no others. Thinking is a process by which important results are obtained. It is a trade which habit will facilitate; and should be disciplined, thorough, and regular. It is the great wheel or lever of the intellect: it is, in a word, the means of getting at facts; and it is in the reach of all, and with more or less success.

Poetry is the volatile part of man's nature; an effervescence of the mind, expanding and magnifying thought; making it subtle, quick, alive to the sense of the universe—alive, because it has its seat in the affections.

There is enough forgotten by each man to

make him famous and rich. We are constantly letting pearls slip through our hands. How many valuable thoughts do we daily meet in books and papers, that have made fortunes for others, which we negligently let pass by, deeming, perhaps, at the time that we would profit by them. These are gold sands. Were they material, they would never escape us—but the gold of the mind, more valuable, is passed by. All eyes do not so clearly see its brightness—hence, many walk unconcernedly amid placers.

Man, by nature, is social. The importance of associating with good and wise men is apparent when we consider that our manners are formed by our associations. Thus, unconsciously, the outer man is formed. We can always tell a man by his associations; and his associations by his manners. Let me see a man act, and I can readily refer you to the society in which he has lived. How necessary, then, that our associates should be of the right stamp.

So much is dependent upon trade or habit, that life iself seems at a stand in its inception. After a child becomes habituated to life, its chances for living are improved. The adult is tenacious of life. It is hard to kill a mature man; and only the inevitable loss of power in old age forces the pendulum of life to stop. F.G.

MAIZE AND TOBACCO.

The Indian Corn looked over the fence,
And what do you think he spied?
A field of tobacco, just ready to bloom,
And stretching in lordly pride.

To the broad-leaved neighbor at once he called,
In accents loud and clear,
"I thought you belonged to a summer clime;
Pray, what are you doing here?"

So then, with a haughty air, replied
That plant of power and pelf,
"You are pleased to ask of my business, sir—
What do you do, yourself?"

"I feed the muscle, and blood, and bone,
That make our farmers strong,
And furnish bread for the little ones
That round their table throng."

"I move in a somewhat loftier sphere,"
The foreign guest rejoined,
"As the chosen friend and companion dear
Of men of wealth and mind.

"I'm the chief delight of the gay young spark;
O'er the wise my sway I hold;
I lurk in the book-worm student's cell—
In the dowager's box of gold.

"Thousands of hands at my bidding work;
Millions of coin I raise"—
He ceased to speak, and in angry mood
Responded the tasseled Maize:

"You're in secret league with dyspeptic ills—
A merciless traitor band;
With clouds of smoke you pollute the air,
With floods of slime the land.

"You tax the needy laborer sore;
You quicken the drunkard's thirst;
You exhaust the soil—and I wish you'd go
To the place whence you came at first."

Humorous Clippings.

"A little nonsense, now and then,
Is relished by the best of men."

"Marquis," said Louis XVI. one day, to the Marquis de Bierce, "you make puns upon all subjects, make one upon me." "Sire," replied the cautious Marquis, you are not a subject."

A Pittsburg paper says, in an obituary notice of an old lady, that "she bore her husband twenty children, and never gave him a cross word." She must have obeyed the good old precept—"Bear and forbear."

A doctor's wife attempted to move him by her tears. "Ah!" said he, "tears are useless. I have analyzed them; they contain a little phosphate of lime, some chloride of sodium and water."

A man's good fortune often turns his head; his bad fortune as often averts the heads of his friends.

An illiterate person, who always volunteered to "go round with the hat," but was suspected of sparing his own pocket, overhearing once a hint to that effect, replied, "Other gentlemen put down what they think proper, and so do I. Charity is a private concern, and what I give is *nothing to nobody*.

A man, in stopping his paper, wrote: "I think fokes doant ort to spent there munny on papers, my father never did, and everyboddy sed he was the smartest man in the kountree, and had got the intelligentist family of buoys that ever dug taters."

A boy being praised for his quickness of reply, a gentleman observed thus: "When children are so very keen they generally become stupid as they advance in years." The lad immediately replied, "What a keen boy you must have been."

A person complained to Dr. Franklin of having been insulted by one who called him a scoundrel. "Ah!" replied the doctor, "and what did you call him?" "Why," said he, "I called him a scoundrel, too." "Well," resumed Franklin, "I presume you both told the truth."

In a recent case for assault in Chelsea, the defendant pleaded guilty. "I think I must be guilty," said he, "because the plaintiff and me were the only ones who were in the room, and the first thing I knew I was standing up, and he was doubled over the stove. You'd better call it guilty."

"Now, gentlemen," said a nobleman to his guests, as the ladies left the room, "let us understand each other; are we to drink like men or like beasts?" The guests, somewhat indignant, exclaimed, "Like men, of course."—"Then," he replied, "we are going to get jolly drunk, for brutes never drink more than they want."

Domestic Department.

Pickled Peaches.—Throw your peaches, a few at a time, in hot lye; let them remain in it but two or three minutes, then put them in clear water, and wipe off all the down. Make a strong brine, lay them in, and let them stand for two or three days. Take them out, wash and wipe them. Place them in jars, and cover with white wine vinegar, and loaf sugar, in the proportion of one quart of vinegar to one pound of sugar. Put them in glass jars, cover close, and keep in a dry, cool place.

Baked Beans.—Few people know the luxury of baked beans, simply because few cooks properly prepare them. Beans, generally, are not cooked half long enough. This is our method: Two quarts of middling sized white beans, two pounds of salt pork, and one spoonful of molasses. Pick the beans carefully; wash, and add a gallon of boiling hot soft water; let them soak in it over night; in the morning put them in fresh water and boil gently till the skin is very tender and about to break, adding a teaspoonfull of saleratus. Take them up dry, and put them in your dish, stir in the molasses, gash the pork, and put it down in the dish, so as to have the beans cover all but the upper surface; turn in boiling water till the top is just covered; bake with a steady fire four or five hours. Watch them, and add more water from time to time as it dries away.

Keeping Eggs.—A writer in the "Prairie Farmer" gives his method of preserving eggs, which he has tried with good success:

"When I wish to keep the eggs four or five months, I drop them in boiling water, letting them remain a moment, then take them out and pack them in oats. But when eggs are desired to keep good one or two years, or to take upon long sea voyages, the most successful method is to pour half a bushel of unslaked lime into a barrel of well water, and after standing a couple of days, put your eggs in. I have kept them perfectly good eighteen months in this way."

Remedy for Bites and Stings.—As many of our readers are preparing to travel or go to the country for the summer, it may be useful to remind them that an ounce vial of spirits of hartshorn should be considered one of the indipensables, as in case of being bitten or stung by any poisonous animal or insect, the immediate and free application of this alkali as a wash to the part bitten, gives instant, perfect, and permanent relief, the bite of a mad dog, we believe, not excepted; so will strong ashes water.

How to Keep Grapes.—Last February, while traveling West, a lady traveler gave me a bunch of Isabella grapes. They were shrunk nearly one-third. They were delicious, and she informed me that she had kept them in the chaff, or more properly the shell, bran, or covering of buckwheat. They had kept with little or no trouble.

Fruit Cake.—Two cups of butter, two of pulverized sugar, two of molasses, seven of flour, six eggs, one pound of currants, one pound raisins, half pound of preserved citron; cinnamon, cloves, nutmeg, &c. to taste. Bake three hours in a moderate oven. If made a month or two before it is to be used, it becomes richer.

To Preserve Pumpkin.—Take good, ripe pumpkin, pare and stew as dry as possible, place in the oven on a sheet, and let it remain until thoroughly dried, not baked; then stow away in a dry place, where it will keep an indefinite length of time—only requiring to be soaked in milk a few hours before using.

Eastport Cake.—Two cups of pulverized sugar, four eggs, three cups of flour, one of milk, two teaspoonsfull of cream of tarter, one of soda; flavor with lemon, peach, or rose water, and last of all, just as going into the oven, a piece of butter the size of a hen's egg, melted and stirred in.

Pie Crust.—One quart of flour, three-quarters of a pound of lard; put in half the flour to half the lard, and with water knead until smooth; roll it out thin three times, touching it each time with the lard, sprinkling it with flour, and rolling it up to be rolled again.

Nails Growing In.—A late writer in the "Ohio Cultivator" gives the following remedy—Cut a notch in the middle of the nail every time the nail is pared. The disposition to close the notch draws the nail from the side. It cured mine after I had suffered weeks with its festering.

Apple Fritters.—Take the yolks of six eggs and the whites of three; beat them well and strain them; then add a pint of milk, and a little salt, half a grated nutmeg, and a glass of cider. Make this into a thick batter with fine flour; slice the apples in rounds, cut out the core, dust them with fine sugar, and let them stand for two hours. When ready, dip each slice in batter, and fry in plenty of boiling lard over a quick fire. Cover with sugar and serve.

Another method—Make a batter with flour and table beer, adding two tablespoonsfull of olive oil to one pound of flour; make it thick, two hours before using it.

A Recipe worth One Thousand Dollars.—Take one pound of sal soda, and a half a pound of unslaked lime, put them in a gallon of water, boil twenty minutes, let it stand till cool, then drain off, and put it in a stone jug or jar. Soak your dirty clothes over night or until they are well wet through, then wring them out and rub on plenty of soap, and to one boiler of clothes, well covered with water, add one teaspoonfull of washing fluid. Boil half an hour briskly, then wash them thoroughly through one suds, and rinse well with water, and your clothes will look better than the old way of washing twice before boiling. This is an invaluable receipt, and I do want every woman to try it. I think with a patent wash-tub to do the little rubbing, the washerwoman might take the last book and compose herself on a lounge, and let the washing do itself. The woman who can keep a secret has known this a year or two, but the husband told it while on an electioneering tour.

Mrs. Dicson's Crackers.—One cup of lard, one cup of warm water, in which is dissolved two and a half teaspoons of cream tartar, and another cup with a teaspoon of soda dissolved in it, and salt to suit the taste; sift into the bread bowl a large quart of flour, rub the lard through the flour, mix the dough with the soda and the cream of tartar, adding enough flour to make the dough quite stiff. They are better if rolled in separate crackers, but are very good rolled thin and cut with a cracker cutter; bake thoroughly without burning, and after they are all baked, set the pan containing them in a cool oven until they are dry and crisp; or they may be baked over as wanted each day.

Sugar Icing for Cake.—Beat two pounds of double refined sugar with two ounces of fine starch, sift the whole through a gauze sieve, then beat the whites of five eggs with a knife upon a pewter dish for half an hour; beat in your sugar a little at a time or it will make the eggs fail, and injure the color; when all the sugar is put in, beat it half an hour longer, and then lay on your almond icing, spreading it even with a knife. If put on as soon as the cake comes from the oven, it will be hardened by the time the cake is cold.

Editor's Table.

ST. LOUIS FAIR.—On account of the war which is now existing, there will be no Fair held by the St. Louis Agricultural and Mechanical Association this year. We doubt whether any of our County Agricultural Societies in Missouri will hold a fair this fall.

ST. LOUIS FAIR GROUNDS TROTTING CLUB.—A Club by the above name has recently been organized. It is composed of gentlemen residing in the city, who have horses which they desire to exercise on the track at the Fair Grounds. It is composed of about one hundred members. No gambling, drunkenness, or immoral conduct is allowed upon the grounds. Walter B. Carr, Esq. is President of the Club.

FATTENING HOGS.—Now is the time to commence feeding hogs for fattening. Most farmers wait till corn is hard, and the fall is more advanced. Hogs fatten much more rapidly in warm weather than cold. We believe corn put into pork this year will bring better returns than if hauled to market.

CURING HAMS.—The quality of hams depend very much upon the process and materials employed in curing them. At the late fair of the Maryland State Agricultural Society, the first premium was awarded to hams cured as follows:

"To 150 pounds of hams, take 1¼ lbs. of saltpetre, 4 quarts of fine salt, with molasses enough to make it a paste; rub well on the flesh side; let them lie four weeks; make a pickle strong enough to bear an egg, let the hams lie in it four weeks, then hang and smoke. Two days before removing from the smoke-house, paint with black pepper and strong cider vinegar, after which bag them."

CURE FOR DISTEMPER IN DOGS—Ed. Valley Farmer: In compliance with your request in the July No. of the journal, I send you a cure for the above disease. Coltsfoot, or Wild Ginger, boiled in sweet milk, given every day from the commencement of the disease, until a cure is effected. Pulverized sulphur on fat meat, is also very good. S. A. H.

FRUIT TREES, &c.—Carew Sanders & Co. of the St. Louis Nursery, have a large stock of Fruit and Ornamental Trees, Currants, Gooseberries, Raspberries, Strawberries, &c. for sale at low prices. See advertisement on the cover.

BARNUM'S ST. LOUIS HOTEL continues to be the resort of the best portion of the traveling public.—How could it be otherwise, when such sumptuous fare, such neat, well kept rooms, and such polite attention are offered to guests. This hotel is the very best kept in St. Louis, and richly merits the extensive patronage it receives. It is situated on the corner of Second and Walnut streets—a central part of the city.

CURE FOR SORE THROAT IN HOGS—Ed. Valley Farmer: Your correspondent, H. L. B. asks for a cure for sore throat in hogs, commonly called quinsy. The following is a sure cure: 2 spoonsfull of sulphur in 1 quart sweet milk, warranted to cure any one hog; and sulphur fed to your hogs freely in slop, will prevent it.

I also send a cure for a Snake Bite: 1 ounce of gum camphor, 1 ounce spirits turpentine, mixed together and rubbed on the wound thoroughly. Will cure in 10 minutes, man or beast. JOHN PACE.

Weston, Aug. 5, 1861.

From Southern Planter.

NEW PROCESS OF CURING TOBACCO.—Dear Sirs: Deeming it expedient that the tobacco growers should know that the curing of tobacco is no longer a mystery, or a work of chance, but a science, I am induced to make this communication. The process of curing is an invention of a well-known gentleman, living in my county, by the name of Drummond.

The curing is done by means of a furnace, which is of the simplest structure possible, while at the same time it combines every advantage to be desired; is free from danger of burning the tobacco barn; requires less fuel, time and labor, and has the quality of curing any color desired.

I witnessed the curing with this new invention, and it was a most happy success. The tobacco cured was lot tobacco, very watery and green, and it was cured to an orange color by design. I verily believe this invention is destined to supersede all others in the way of tobacco curing, and were it not for the fact that the inventor has applied for letters patent, I would give a full description of the invention and manner of curing; but, not wishing to infringe his rights, I will say no more, as he, in due time, no doubt, will set it before the people.

MEDICAL QUALITIES OF CARROTS.—Stewart, in his excellent work on Stable Economy, says: "Not only do carrots give strength and endurence to sound horses, but also give recovery and health to such as are sick. There is nothing better, perhaps nothing so good. When first given, they are strictly diuretic and laxative, but as the horses become accustomed to them these effects cease to be produced. They also improve the state of the skin. They form a good substitute for grass, and an excellent alterative for horses out of condition. To sick and idle horses, they render grain necessary. They are beneficial in all chronic diseases connected with breathing, and have a marked influence on chronic cough and broken wind. They are serviceable in diseases of the skin; and in combination with oats restore a worn horse much sooner than oats alone."

A NEW DISCOVERY IN WINE MAKING.—A new discovery made by a wine grower near Bordeaux, France, has just been made public, and has somewhat startled the old and steady wine factors, makers and doctors of that place. The discoverer of the natural phenomenon by which wines are rendered at once fit for bottling, without the long probation they have hitherto been made to undergo, has been for some years living in the mountains. In the various qualities of wine grown by him, he was struck with the difference of development of maturity which took place according to the temperature of the cellar in which the barrels were stored. The higher up the mountain the sooner did the wine arrive at perfection. The reason of this difference soon became clear—atmospheric pressure diminishes gradually as the region rises above the level of the sea. This discovery induced the experiment of raising and diminishing at will the atmospheric pressure upon the barrels and with the most perfect success, it is said, so as to make old wine in as many days as it formerly took months.

☞ Farmers, Save your Doctors' Bills.

GUNN'S (John C.) DOMESTIC MEDICINE, $3 00; or, poor man's friend in the hours of affliction, pain, and sickness. This points out in plain language, free from Doctors' terms, the diseases of men, women, and children, and the most approved means used in their cure, and is intended expressly for the benefit of families. It also contains descriptions of the medicinal roots and herbs of the United States, and how they are to be used in the cure of disease. 8vo., marble edge, sheep. Sent free of postage, on receipt of price.—Agents wanted to sell above. C. M. SAXTON,
sep2t Publisher, 25 Park Row, New York.

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Dadd's (Geo. H.) American Cattle Doctor.

Price, $1.00. Containing the necessary information for preserving the health and curing the diseases of oxen, cows, sheep, and swine, with a great variety of original recipes and valuable information in reference to farm and dairy management, whereby every man can be his own cattle doctor. The principles taught in this work are, that all medication shall be subservient to nature—that all medicines must be sanitive in their operation, and administered with a view of aiding the vital powers, instead of depressing with the lancet or by poison. C. M. SAXTON,

Publisher, 25 Park Row, New York.

☞Sent free of postage, on receipt of price. [sep2t

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